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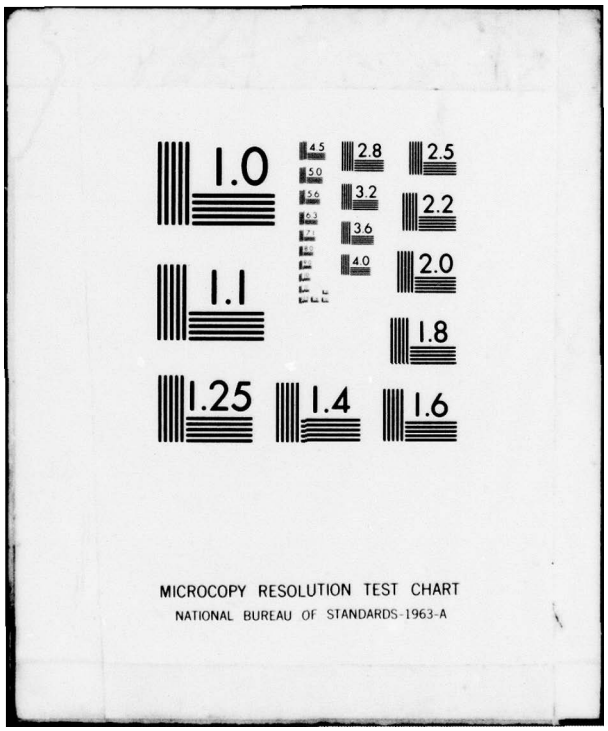
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ARI TECHNICAL REPORT
TR-79-B4

Development and Implementation of a Performance Based Training and Evaluation System for the Combat Arms

LEVEL II

AD A075431

by

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Army Project Number
16 2Q163731A770

Individual Extension
Training System

18 ARI

Technical Report 19 TR-79-B4

6 DEVELOPMENT AND IMPLEMENTATION OF A PERFORMANCE BASED TRAINING AND EVALUATION SYSTEM FOR THE COMBAT ARMS

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This report on an advanced development research project is designed to meet military management requirements for research bearing on a specific management problem. A limited distribution is made primarily to the operating agencies directly involved.

JCB

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CHAPTER 1. INTRODUCTION AND BACKGROUND

This report describes the third year effort of a three-year project, the objective of which was the development and experimental implementation of a system for providing individual skill training in an infantry unit. In this chapter, as background, we will briefly review the first two years of the developmental activities of the project and follow that with a summary description of the system design.

RESUME OF PRIOR TWO YEARS WORK

First Contract Year

A program of R&D was initiated in November 1975 to design, develop, and field test an Individual Extension Training System (IETS). The first year's work consisted of three major sub-efforts: (a) design of an IETS model, (b) development of prototype IETS components, and (c) a series of research studies to generate information on the effects of major system variables on operation of the IETS.

Briefly, the following activities were accomplished.

MODEL DESIGN

In order to generate the training information required for designing a feasible model of the prototype IETS, a number of activities were conducted early in the project in order to insure that the IETS model would fit with Army training doctrine and plans, philosophy, resources, procedures, and cope with "real world" problems.

Relevant guidance documents, e.g., TRADOC regulations and planning documents, Soldier's Manuals, ARTEP, task lists, POI, and training circulars were surveyed for their impact upon individual training in units.

An inventory was made of all extant resource materials, e.g., TEC lessons, training aids, training films, FM, and TM to determine their suitability and availability for the conduct of individual training in units.

Observations of then current training operations were made and extensive interviews were conducted with commanders, training supervisors, and trainers at all levels (varying from the ADC and G-3 to squad leaders) in the 7th Infantry Division, Fort Ord.

What evolved was a modest system for conducting individual training in the unit that had the following characteristics: (1) decentralization of training, (2) individualization of training, (3) job-performance orientation of training, (4) self-pacing of training, and (5) no formal school structure for training. The major management and training fucntions of IETS were identified as follows for three training roles:

Training Supervisor (platoon leader/platoon sergeant), with the responsibility to train squad leaders to be trainers, schedule training, provide quality control, and support training.

Trainer (squad leader), with the responsibility to diagnose individual training needs, train and test squad members, and record performance.

Trainee (squad member), with the responsibility to learn job skills for and perform in his duty position, cross-train in other duty positions, and prepare for advancement.

DEVELOPMENT OF IETS COMPONENTS

Following the IETS model design, three concurrently running developmental efforts were undertaken.

1. A prototype set of training management and record keeping procedures was constructed for use by the training managers involved with the IETS. This set of procedures provided the information needed for making training decisions at various management levels.

2. A sample of approximately 30 infantry officers and NCOs rated the difficulty of all the 11B and 11C, Skill Level 1 and 2 tasks listed in the Soldier's Manual. A sample of some of the most difficult and moderately difficult tasks, representing both MOS and both skill levels, were selected for development of modular sets of prototype performance-oriented instructional materials. The corresponding performance tests for the same tasks were also developed.

3. These sets of instructional materials and performance tests were then combined into 37 integrated job-task training/testing packages (TTP) and prepared for try out in the 7th Division, along with the management and record keeping procedures.

Second Contract Year

The second year of the project continued the program of R&D and was devoted to several sub-efforts: (a) try out of prototype IETS components, (b) continued development and refinement of components of the IETS, (c) continuation of the research studies, (d) development of guidelines and application plans, and (e) design of a relatively large-scale field test of the IETS.

Midway through the second year, project sponsorship passed from TRADOC/Trainind Developments Institute (TDI) to Combat Arms Training Board (CATB), the TRADOC proponent for training management in units. With this development, it was learned that the IETS should be made an integral component of CATB's battalion training management system (BTMS) in order to be given an opportunity to function. Thus, along with CATB sponsorship came (1) detailed specification of system and system component characteristics, and (2) a requirement for the addition of formal procedural steps during the component-development process, including a formal two-phase review/approval cycle by CATB and US Army Infantry School (USAIS) of job/task analyses and TTP lessons.

Briefly, the following activities were accomplished.

TRY OUT OF PROTOTYPE COMPONENTS

In November 1976, all riflemen (11B), mortarmen (11C), squad leaders, platoon sergeants/platoon leaders, and company commanders of the three rifle companies, plus the battalion commander and S-3 staff, of one of the maneuver battalions of the 7th Division devoted three weeks to a try out of IETS system components. Performance data and information gathered through interviews indicated that the prototype system as constituted at that time was feasible. Specifically, squad leaders could conduct such training and responded favorably to the responsibility; trainers and supervisors liked the TTP lessons and wanted more; supervisors were able to provide quality control; high turbulence reduced both time and personnel available for training, but did not degrade the IETS; the system's decentralization and individualization of training permitted a wide range of learning styles and rates.

Studies on incentives for learning[1] and individual pre-testing procedures[2] were executed as in-house projects by ARI.

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[1]See Bloom, R. D., *Enlisted Ratings of Possible Incentives for Skill Acquisition*, ARI Research Problem Review, Number 77-28.

[2]See Hiller, J. H., *A Methodology for Estimating the Cost-Effectiveness of Alternative Pretests*, ARI Technical Report, in press.

SYSTEM COMPONENT DEVELOPMENT

The IETS and its components were developed in detail. Major categories of items developed were: a refined system model and SOP for operation of the IETS; complete TTPs for many SM tasks for MOS 11B and 11C, Skill Levels 1 and 2; record keeping procedures and forms; and training programs for training supervisors and trainers. During development of these components, officers and men of an infantry battalion provided subject matter expertise, informal try out of materials, and feedback on perceptions of system components and procedures.

GUIDELINES AND APPLICATION PLANS

Guidelines for the preparation of TTP for MOS other than 11B and 11C were drafted. The guidelines included guidance on conduct of the prerequisite job analyses as well as on preparation of the sub-components of TTPs (SM analysis, determination of detailed task actions, development of checkouts, specification of pre- and post-test procedures, determination of instructional sequences, integration of relevant supporting instructional aids, preparation of lesson outlines, preparation of detailed lesson booklets, ...). A generalized plan for the application of the IETS to other combat and combat support MOS was drafted.

The remaining sections of the chapter describe IETS; its characteristics, structure, functions, and components.

THE INDIVIDUAL EXTENSION TRAINING SYSTEM (IETS)

The Individual Extension Training System (IETS) was designed to provide the unit commander and his training managers with an operational system for conducting individual training in the units. The IETS was designed to be compatible with a number of other innovations which are being introduced into the Army's training establishment, i.e., the Skill Qualification Tests (SQT) of the new Enlisted Personnel Management System (EPMS), Soldier's Manuals (SM), Training Extension Courses (TEC), and the Army Correspondence Program (ACP). However, the IETS is unique in having prepared extensive materials that are specifically designed to help trainers to plan, prepare, and conduct performance based skill training and evaluation. Its major components are management procedures, record keeping techniques and forms, packages (modules) of task training materials and performance checkouts for developing and assessing soldier skill proficiency, and guidance for trainers and training supervisors in operation of the IETS.

The prototype IETS structure, functions, and component training and management materials were developed in detail for the infantry's two highest density MOS (11B and 11C) at Skill Levels I and II. The sections which follow present details of the IETS SOP[1] for conducting training in all the duty positions for MOS 11B and 11C at Skill Levels I and II.

System Characteristics

The system displays six major characteristics which make it consistent with and responsive to current Army training doctrine. These characteristics are as follows:

1. The system with its supporting instructional materials meshes with the EPMS and its supporting SQT. The Soldier's Manual tasks comprise the foundation from which both the SQT items and the IETS training materials are derived. The Soldier's Manuals spell out the tasks, the IETS materials spell out the training for the tasks, and the SQT items spell out the materials and standards for demonstrating task proficiency for promotion.

2. The system is MOS-duty position oriented. The instructional materials are specifically tailored to teach the skills and information required for performance of 11B and 11C job tasks. All materials required for learning a given task are identified in a Task Training Plan (TTP).

All the TTPs required for learning to perform the tasks that comprise a duty position are assembled into integrated instructional modules, one for each duty position. The duty position modules are in turn organized into functional groupings. This packaging makes available to the soldier task training material for all tasks required in his MOS whether they be job-duty specific or common across two or more duty positions.

3. The system is tailored for application in units rather than in schools or training centers. The materials, however, could be used in school settings. The focus is on learning the skills the soldier requires to round out his present job duty performance, to crosstrain in order to perform in other duty positions, and/or prepare himself for advancement to a higher skill level. The emphasis is on the soldier's active, hands-on learning with unit personnel, equipment, and facilities while serving in a unit assignment. This is in contrast to the more traditional school approach in which the soldier is in a passive student role attending scheduled classes to acquire information for later application on the job.

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[1]The complete SOP appears in an accompanying Technical Report, *Application of the Individual Extension Training System: Guidelines for Materials Development and System Implementation*, FR-WD-CA-78-12, by William H. Melching and Morris Showel.

4. The system decentralizes training responsibility to the squad leader. The squad leader is provided with complete materials, guidance, and support for conducting the training of his individual squad members, and, within limits, it is he who decides who needs to be trained and in which tasks. Supported by his platoon sergeant, the squad leader diagnoses individual job-task deficiencies, conducts the required training, and administers the appropriate performance checks to assure task proficiency.

5. The system calls for the conduct of job training at the level of the individual squad member. The specific job-skill needs of each individual are determined and provided for as quickly as possible. Group instruction is conducted only when it is determined that more than one member of the squad is in need of the same job-task training. Because individuals have quite differing needs for training depending upon their experience and training histories, the squad leader will usually be involved in training each of his individual squad members in quite differing job skills at any given time.

6. The system calls for self pacing of instruction. There is no set time for completing a task; there is no prescribed schedule to be followed in achieving task proficiency. Because the squad leader's goal is to train each of his men to achieve job-task proficiency as quickly as possible, he spends only the amount of training time that is actually required by each man. Where one man may be close to proficiency in a given task, another man (new to the squad) may be completely inexperienced in the same task. The squad leader may be able to bring the first man up to proficiency in an hour's instruction while he may have to devote several hours to reach the same level with the second man.

The system also provides for self-instruction in those tasks where a squad member can study or practice on his own or with his squad-member peers. Depending upon a particular individual's abilities and motivation, and upon the task being learned, the squad leader may elect to have the training conducted by himself or his assistants, have the man study and practice independently, organize peer-instruction sessions, or employ an appropriate combination of all of these.

IETS STRUCTURE AND FUNCTIONS

The IETS is a training system designed to operate at squad and platoon level and below. It operates within, and supports the collective training goals of, the parent battalion, company, and platoon.

Because of the inter-locking ties that exist among the individual tasks required in battalion and company-level ARTEP, the tasks specified in the Soldier's Manuals, the tasks that are tested by the SQT for advancement through the EPMS, and the Task Training Packages,

the IETS serves as the unit commanders' most direct training vehicle for achieving the task proficiency required by the EPMS and ARTEP collective training goals.

Figure 1.1 presents a skeletal diagram of the structure of the system indicating the essential functions that are performed by key personnel at each organizational level. The boxes in the figure represent five levels of organization ranging from battalion, down to individual squad member, arranged in hierarchical order. The short statements in each box indicate the major functions performed at the level. The two-way arrows in the upper left of the figure connecting the battalion and company levels depict the two-way communication and negotiations that occur in determining priorities and scheduling training. The multiple two-way arrows that interconnect battalion, company, platoon, and squad levels on the right side of the diagram represent the communication lines for requesting and providing support.

The diagram shows that at the most general level of description, the system operates as follows: battalion and company level officers establish training priorities, manage training, schedule training, and provide for its support; platoon leaders/platoon sergeants supervise, guide, and support squad leaders in the conduct of training; squad leaders train and determine the task proficiency of their squad members; individual squad members train on selected tasks and keep track of their developing task/duty position proficiency.

THE COMPONENTS OF THE IETS

Instructional materials, record keeping documents and management guides make up the IETS components. They are described below and examples are included.

Task Training Plan (TTP)

Each TTP consists of a task lesson which provides the basic instructions for each job task. The lesson contains the following major sections: (a) Training Objective, (b) Prepare for Task Training, (c) Guide for Task Training, (d) Guide for Task Checkout, and (e) Task References. The TTP was designed primarily to be used by trainers to prepare themselves to conduct training. Enclosed as an example is a TTP for the task, *Start a Wheeled-Vehicle Engine Using Auxilliary Power (M151, M715, M561)*, which is one of the component tasks of the Wheeled Vehicle Driver duty position (see Figure 1.2).

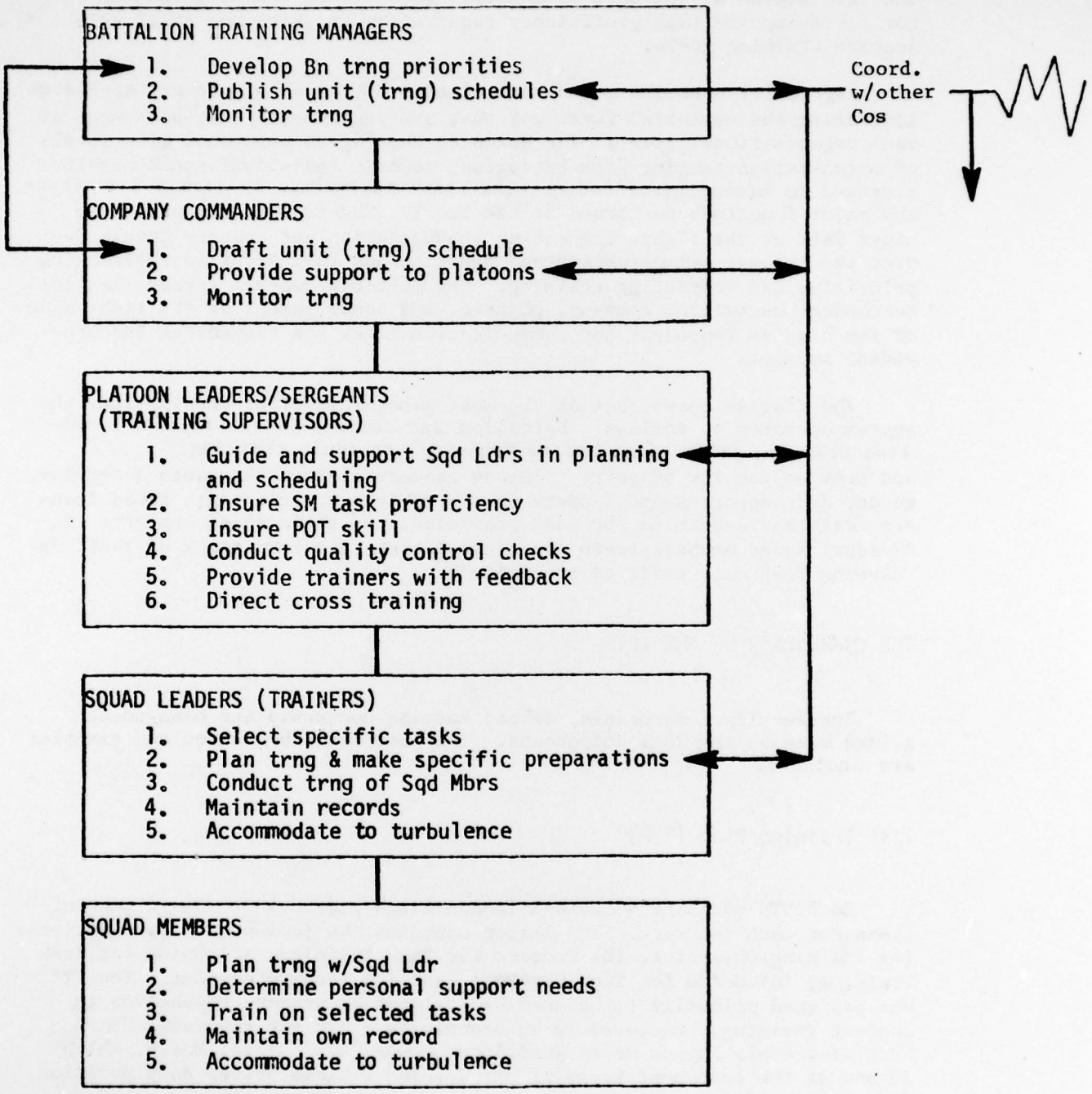

Figure 1.1 Diagram of Structure & Functions of IETS

TRAINING OBJECTIVE

TASK: Start a Wheeled-Vehicle Engine Using Auxiliary Power (M151, M715, M561)

CONDITIONS: Given:
Two wheeled vehicles (one operative and one with a dead battery)
An auxiliary power cable.

T

STANDARDS: Start the engine of the vehicle with the dead battery, using an auxiliary power cable without damaging either vehicle.

PREPARE FOR TASK TRAINING

PREREQUISITES

None.

OBTAIN RESOURCES

1. Equipment: For each soldier - Two wheeled vehicles (one operative and one with a dead battery), an auxiliary power cable.
2. Location: Field or garrison.
3. Training Aids - None.

PREPARATION

Assign qualified men as assistant instructors to help supervise the men learning the task.

GUIDE FOR TASK TRAINING

TRAINING OBJECTIVE

Give the soldier this information: YOU WILL START THE ENGINE OF A WHEELED VEHICLE THAT HAS A DEAD BATTERY. TO DO THIS, YOU WILL USE AN AUXILIARY POWER CABLE CONNECTED TO AN OPERATIVE VEHICLE.

PRETEST

ORIENTATION

Give the soldier this information: THE SLAVE RECEPTACLE PROVIDES 24 VDC FROM THE VEHICLE TO EXTERNAL EQUIPMENT WHEN THE VEHICLE ENGINE IS OPERATING OR ACCEPTS 24 VDC FROM AN EXTERNAL SOURCE FOR THE VEHICLE BATTERIES WHEN THE ENGINE IS NOT RUNNING. THE RECEPTACLE IS CONNECTED BY CABLES TO THE BATTERY.

SAFETY

Use extreme care when working near the batteries. Grounding the positive terminal to the vehicle structure can cause severe personal injury.

DEMONSTRATION

Demonstrate how to start a wheeled-vehicle engine using auxiliary power.

TASK STEPS (Perform in order)

WARNING: Use extreme care when working near the batteries. Grounding the positive terminal to the vehicle structure can cause severe personal injury and damage to the vehicle.

1. DRIVE THE SLAVING VEHICLE CLOSE enough TO THE SLAVED VEHICLE that the auxiliary power cable can be plugged into the slaving receptacle of each vehicle.
2. STOP THE ENGINE of the slaving vehicle.

Figure 1.2 Example of a TTP

3. EXAMINE THE IGNITION switch (M151, M715) OR MASTER SWITCH (M561) OF THE SLAVED VEHICLE; TURN OFF if necessary.

4. UNSCREW protective CAP OF SLAVE RECEPTACLE OF SLAVING VEHICLE; PLUG auxiliary power CABLE INTO RECEPTACLE.

   CAUTION: Before inserting plug, line up positive prong of auxiliary power cable with positive hole of slave receptacle (+ to +) and negative prong of auxiliary power cable to negative hole of slave receptacle (- to -). You might burn out the diodes or wiring of the alternator if you do not match polarities correctly.

5. REPEAT STEP 4 ON SLAVED VEHICLE.

   CAUTION: Before inserting plug, line up positive prong of auxiliary power cable with positive hole of slave receptacle (+ to +) and negative prong of auxiliary power cable to negative hole of slave receptacle (- to -). You might burn out the diodes or wiring of the alternator if you do not match polarities correctly.

6. START ENGINE OF SLAVING VEHICLE; RUN AT FAST IDLE.

7. START ENGINE OF SLAVED VEHICLE.

8. After slaved vehicle is running smoothly, DISCONNECT auxiliary power CABLE FROM SLAVED vehicle receptacle, THEN SLAVING VEHICLE RECEPTACLE; REPLACE protective CAPS on slave receptacle of both vehicles.

SKILL PRACTICE

If possible, have soldiers practice starting engines with different combinations of the M151, the M715, and the M561 together as slaved vehicle and slaving vehicle. Have them practice until they can perform to standard.

GUIDE FOR TASK CHECKOUT

TRAINER PREPARATION

Assemble two wheeled vehicles for each soldier, one operative and one with a dead battery.

SAFETY

USE EXTREME CARE WHEN WORKING NEAR THE BATTERIES. GROUNDING THE POSITIVE TERMINAL TO THE VEHICLE STRUCTURE CAN CAUSE SEVERE PERSONAL INJURY.

CHECKOUT

Read to the soldier: "START THE ENGINE OF THE VEHICLE THAT HAS A DEAD BATTERY. TO DO THIS, CONNECT THE AUXILIARY POWER CABLE BETWEEN THE RECEPTACLE OF THIS VEHICLE AND OF THE VEHICLE THAT IS OPERATING".

STANDARDS

The engine of the vehicle with the dead battery is started, using an auxiliary power cable without damaging either vehicle.

SCORE, RECORD RESULTS, AND ANALYZE PERFORMANCE FAILURES.

TASK REFERENCES

SM Task 071-11A-6004, "Start a Wheeled Vehicle Engine Using Auxiliary Power (M151, M715, M561)", pages 2-V-A-4 - 2-V-A-4.2.

TM 9-2320-218-10, Operator's Manual, Truck: Utility: ¼ ton, 4x4, M151, M151A1, M151A2, pages 2-36, 2-45.

TM 9-2320-242-10, Operator's Manual, Truck: Cargo: 1¼ ton, 6x6, M561, pages 2-46, 2-47.

TM 9-2320-244-10, Operator's Manual, Truck: Cargo: 1¼ ton, 4x4, M715, page 69.

Figure 1.2 continued

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Task Training Outline (TTO)

The TTO cards, which are pocket size with a water resistant coating, outline the training content, task checkout, administrative procedures, and support requirements. They are abbreviated versions of their counterpart TTPs. These cards are intended to provide the trainer with a handy field reference during the conduct of training and checkouts. Reproductions of the TTO cards for the task *Start a Wheeled Vehicle Engine Using Auxiliary Power (M151, M715, M561)* are enclosed as an example. The white cards are the trainer's guide for task training and skill practice. The pink card is the trainer's guide for task checkout (see Figure 1.3).

TASK: Start a Wheeled-Vehicle Engine Using Auxiliary Power (M151, M715, M561) 071-11A-6004

PREPARE FOR TASK TRAINING T●

OBTAIN RESOURCES

1. Equipment: For each soldier - Two wheeled vehicles (one operative and one with a dead battery), an anxiliary power cable.
2. Location: Field or garrison.
3. Training Aids: None.

PREPARATION

Rehearse and insure assistant instructors know their job.

GUIDE FOR TASK TRAINING

TRAINING OBJECTIVE

YOU WILL START A VEHICLE WITH A DEAD BATTERY BY USING ANOTHER VEHICLE WITH A GOOD BATTERY.

PRE-CHECKOUT

ORIENTATION

THE SLAVE RECEPTACLE PROVIDES 24 VDC FROM THE VEHICLE TO EXTERNAL EQUIPMENT WHEN THE VEHICLE ENGINE IS OPERATING OR ACCEPTS 24 VDC FROM AN EXTERNAL SOURCE FOR THE VEHICLE BATTERIES

Side 1 (white card)

Figure 1.3 Example of TTO Cards

WHEN THE ENGINE IS NOT RUNNING. THE RECEPTACLE IS CONNECTED BY CABLES TO THE BATTERY.

SAFETY

USE EXTREME CARE WHEN WORKING NEAR THE BATTERIES. GROUNDING THE POSITIVE TERMINAL TO THE VEHICLE STRUCTURE CAN CAUSE SEVERE PERSONAL INJURY.

DEMONSTRATION

Demonstrate how to start a wheeled-vehicle engine using auxilliary power.

TASK STEPS

1. DRIVE THE SLAVING VEHICLE CLOSE TO THE SLAVED VEHICLE.
2. STOP THE ENGINE.
3. EXAMINE THE IGNITION OR MASTER SWITCH OF THE SLAVED VEHICLE; TURN OFF.
4. UNSCREW CAP OF SLAVE RECEPTACLE OF SLAVING VEHICLE; PLUG CABLE INTO RECEPTACLE.
5. REPEAT STEP 4 ON SLAVED VEHICLE.
6. START ENGINE OF SLAVING VEHICLE; RUN AT FAST IDLE.
7. START ENGINE OF SLAVED VEHICLE.
8. DISCONNECT CABLE FROM SLAVED RECEPTACLE, THEN SLAVING VEHICLE RECEPTACLE; REPLACE CAPS.

(2)

Side 2 (white card)

Start a Wheeled-Vehicle Engine Using Auxiliary Power (M151, M715, M561) 071-11A-6004

SKILL PRACTICE

If possible, have soldiers practice starting engines with different combinations of the M151, the M715, and the M561 together as slaved vehicle and slaving vehicle. Have them practice until they can perform to standard.

(3) & (4)

Side 3 (white card)

Figure 1.3 continued

Start a Wheeled-Vehicle Engine Using Auxiliary Power (M151, M715, M561) 071-11A-6004

GUIDE FOR TASK CHECKOUT T

TRAINER PREPARATION

Assemble two wheeled vehicles for each soldier, one operative and one with a dead battery.

SAFETY

USE EXTREME CARE WHEN WORKING NEAR THE BATTERIES. GROUNDING THE POSITIVE TERMINAL TO THE VEHICLE STRUCTURE CAN CAUSE SEVERE PERSONAL INJURY.

CHECKOUT

"START THE ENGINE OF THE VEHICLE THAT HAS A DEAD BATTERY. TO DO THIS, CONNECT THE AUXILIARY POWER CABLE BETWEEN THE RECEPTACLE OF THIS VEHICLE AND OF THE VEHICLE THAT IS OPERATING".

STANDARDS

The engine of the vehicle with the dead battery is started, using an auxiliary power cable without damaging either vehicle.

SCORE, RECORD RESULTS, AND ANALYZE PERFORMANCE FAILURES.

(5) & (6)

Side 5 (pink card)

Figure 1.3 continued

Course Management Plan (CMP)

For each duty position package of instructional materials there is a Course Management Plan which provides the administrative guidance to the trainer or supervisor. The Course Management Plan, 11B10, Wheeled Vehicle Driver, is enclosed as an example (see Figure 1.4). It consists of four elements.

1. It contains a *Road Map* which is a graphic representation of the component tasks of the duty position and their recommended training sequence. The Road Map is on page 2 of the plan. Instructions on how to read the road map are found on page 1. Note that task A6004, "Start Vehicle w/ Auxiliary Power" is included in the road map.

2. The *Resources List* is a compilation of all facilities, training aids, and equipment needed to conduct training for all tasks in a duty position. The resources needed for the Wheeled Vehicle Driver training, 11B10, are found on page 3 of the plan. Note the column containing the resources needed for the task "Start Vehicle with Auxiliary Power".

3. A *Guide for Self Study* is included in the plan to inform the soldier of which tasks he can learn by self-study and which tasks require help of special resources, e.g., a firing range. Note the chart on page 4 of the plan which indicates that task "Start Vehicle with Auxiliary Power" can be studied on own.

4. *Tips to the Trainer* are included to assist the trainer in such areas as preparing skill practice exercises, using assistant instructors, and/or checkout planning. These tips are suggestions for pre-planning the actual conduct of instruction. See pages 4 and 5 of the example enclosed.

COURSE MANAGEMENT PLAN

11B10

WHEELED VEHICLE DRIVER

REFERENCE
FT. ORD PROJECT, 1978
U.S. ARMY TRAINING BOARD

Figure 1.4 Example of a CMP

1. ROAD MAP

How to Read the Road Map (Figure 1.)

The road map shows you the order for teaching or learning the tasks which an 11B10 Wheeled Vehicle Driver must be able to perform.

Tasks are shown on the map as circles. Each task is labeled with its Soldier's Manual number and with key words from its task title. Some tasks cannot be mastered until other tasks (prerequisites) have been learned. Tasks that are prerequisites for a given task are shown below that task and connected to it with vertical lines. For example, to learn Task 6003, Drive Cross-Country: Night, you should first learn Tasks 6002, Drive in a Built-Up Area, and 6001, Drive Cross-Country: Day.

Usually, it will be easier for you to learn the tasks from left to right on the map. For example, Tasks 6006, 6007, and 6005 should be learned first; then 6002, 6001, and 6003; and finally Task 6004.

The box at the left of the road map is there to remind you that the Wheeled Vehicle Driver must also learn the 11B10 Rifleman/Grenadier tasks.

To sum up, LEARN TASKS FROM LEFT TO RIGHT, AND FROM BOTTOM TO TOP.

How to Maintain Performance

Notice that some of the tasks have double circles. If you have followed the task learning sequences to perform these double circle tasks to standard, then by periodic practice of the double circle tasks, one can make the reasonable assumption that the prerequisite tasks can also be performed.

To sum up, ONCE TRAINING HAS BEEN COMPLETED ON ALL TASKS OF THE DUTY POSITION, YOU CAN MAINTAIN YOUR SKILL ON THESE MORE CRITICAL TASKS BY REFRESHER TRAINING ON THE DOUBLE CIRCLE TASKS.

2. RESOURCES LIST

The Resources List (Figure 2) provides a listing of equipment, training aids, and facilities for each task in the duty position. This list will assist those responsible for planning training in determining the ammunition, training aids, and field areas, including ranges, that are required for each task.

3. GUIDE FOR SELF STUDY

The Guide for Self Study (Figure 3) is for the purpose of assisting the individual who is studying the tasks of the duty position on his own. The guide informs the individual which tasks of the duty position he can learn on his own, which tasks he will need assistance with from a peer or a supervisor, and which tasks are impractical for him to attempt on a self-study basis. For some tasks of the duty position, such as those requiring driving of a vehicle, the individual must have the assistance of a qualified peer or a supervisor to practice the task steps. Other than studying the requirements for these tasks, task mastery and practice is impractical in a self-study program. You must ask your superior to assign a qualified peer to assist you if you do not have a volunteer. Your superior will check out your task mastery.

Note the chart "Self Study Requirements for 11B10 Wheeled Vehicle Driver Duty Position" (Figure 3). This chart shows the tasks that you can study on your own, and those for which you will need a peer to assist you and give you feedback.

If you are engaged in a self study program, there are a number of steps that you can take toward mastery of tasks and in preparation for field work. These steps are outlined below:

a. Study the duty position Road Map and also look at the self-study chart. Select the task you wish to master. Follow the sequence prescribed for learning as laid out in the Road Map, unless, according to the self-study chart, you need a peer to assist you in task practice.

Figure 1.4 continued

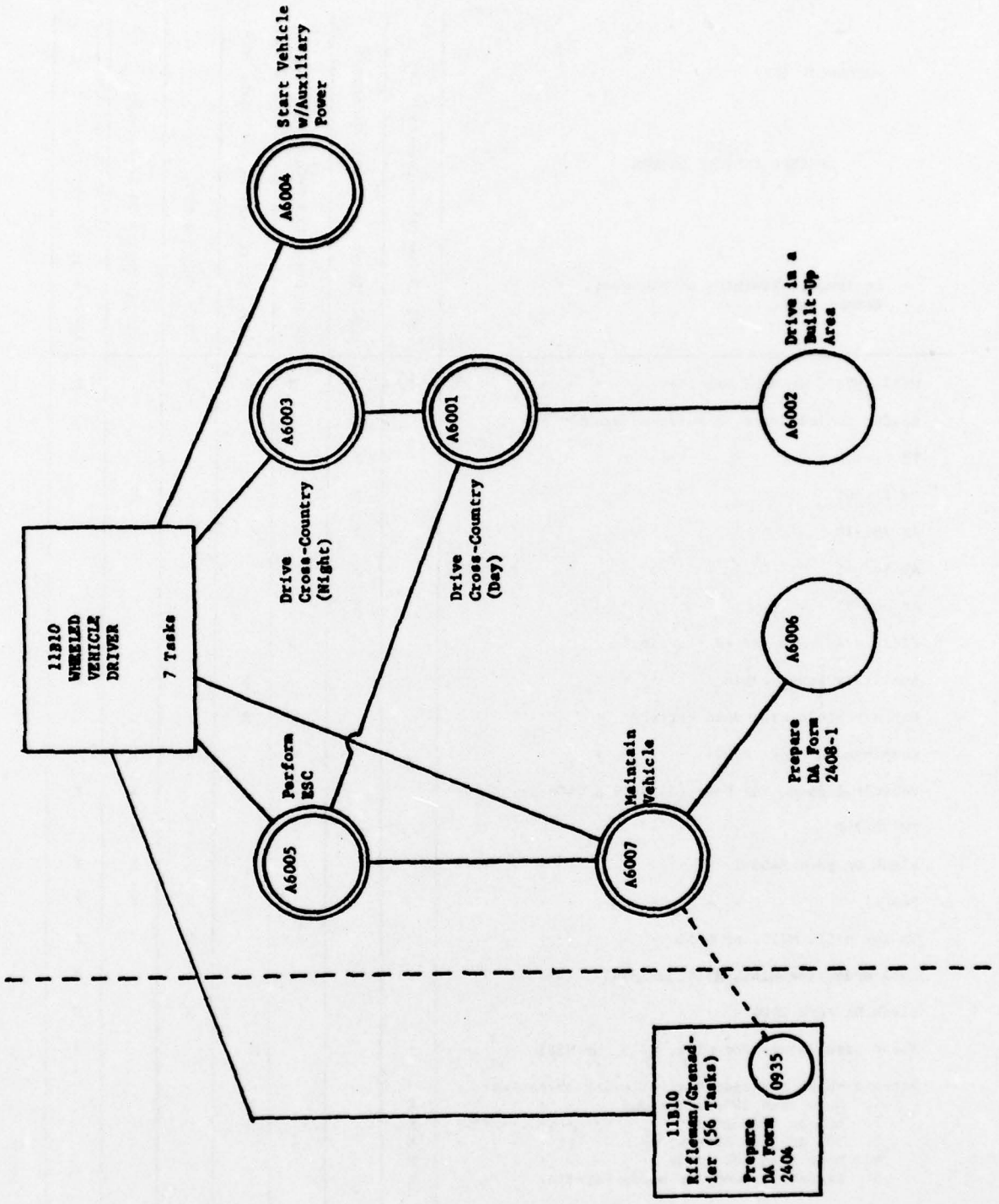

Figure 1.

2

Figure 1.4 continued

RESOURCES LIST

11B10
WHEELED VEHICLE DRIVER

Equipment, Training Aids, Areas, Ranges, etc.	6001 Drive Cross-Country - Day	6002 Drive in a Built-Up Area	6003 Drive Cross-Country - Night	6004 Start Vehicle with Aux. Power	6005 Perform ESC	6006 Prepare DA Form 2408-1	6007 Maintain Vehicle
M151, M715, or M561 vehicle	X	X	X	X	X		X
Roads, Vehicle Park, & Built-up areas		X					
TM 21-300		X					
Tm 21-305		X					
AR 385-10		X					
AR 385-55		X					
AR 600-55		X					
Field area with varied terrain			X				
Auxiliary Power cable				X			
Extra vehicle with dead battery				X			
Completed DA Form 2404						X	
Vehicle logbook (DA Forms 2408-14 & 2408-5)						X	X
TM 38-750						X	
Blank DA Form 2408-1						X	X
Pencil					X	X	X
TM for M151, M715, or M561					X		X
Lube order for M151, M715, or M561							X
Blank DA Form 2404					X		X
Basic issue items for M151, M715, or M561							X
Terrain which includes the following obstacles:							
1. More than 30% side slope	X						
2. 60% or less grade	X						
3. 30% or less side slope	X						
4, More than 60% grade	X						
5. Extremely sandy or muddy terrain	X						
Appropriate tools for vehicle					X		
Current DA Forms 2408-1, 2408-5, and 2408-10					X		
Appropriate ESC TM					X		

Figure 2. 3

Figure 1.4 continued

b. Get the Task Training Plan (TTP) on the task you have selected. Read the task lesson carefully, paying special attention to the task (or subtask) steps.

c. If a TEC lesson is referenced in the TTP, it should be viewed. It should provide you with a visual demonstration of the task to be performed.

d. If equipment or training aids are required in performing the steps, obtain them from your unit supply or training aids facility.

e. Start to practice those steps of the task that you can perform on your own.

f. You may need a peer to assist you. He should be qualified in the duty position. If you do not know such a person, ask your supervisor to assign someone who is qualified. This individual can demonstrate those tasks that you are unable to do on your own; he can give you feedback on how well you perform the task steps, and he can put you through a "dry run" of the checkout and conduct practice sessions until you meet the required standards.

g. Once you feel you are ready for the checkout, go to your supervisor or his designated agent and perform the task under the condition stated in the TTP. If a supervisor is not available for a checkout, you should proceed to the next task as indicated on the Road Map.

h. Once you have taken the checkout, make the appropriate entries in your job book. Your supervisor will make the entry in his trainer's notebook.

SELF STUDY REQUIREMENTS
FOR 11B10 WHEELED VEHICLE DRIVER DUTY POSITION

TASK	STUDY ON OWN	PEER NEEDED	FIELD TRAINING AREA REQUIRED
6001 Drive Cross-Country - Day		X	X
6002 Drive in a Built-Up Area		X	
6003 Drive Cross-Country - Night		X	X
6004 Start Vehicle w/Auxil. Power	X		
6005 Perform ESC	X		
6006 Prepare Form 2408-1	X		
6007 Maintain Vehicle	X		

Figure 3.

4. TIPS TO THE TRAINER

Tips to the Trainer provide valuable hints, none of which are mandatory, but which have proved to be of considerable assistance in conducting this training under field conditions. This list of tips is for the purpose of passing on the experience of others and their know-how.

Experience is a great teacher, and these Tips to the Trainer are an effort to include helpful hints from experienced instructors in order that you can get off to a good start in planning, organizing, and conducting instruction. There is no order or priority for the tips that are offered. Use them as they fit your training situation.

a. Ensure that your training plan is coordinated with the scheduled availability of the training areas. For example, if the training areas are scheduled for next month plan to make maximum use of the training areas; that is, conduct what training you can in garrison so that you do not waste time in the field.

b. Determine which of the men in your unit are qualified in the duty position of Wheeled Vehicle Driver. If none, examine your Trainer's Notebook to see which men are qualified in the various Wheeled Vehicle Driver tasks. If you have qualified men, use them as assistant instructors during task training.

c. Use assistant instructors with soldiers who do not know how to perform the tasks. Qualified soldiers can also assist you in giving demonstrations and laying out training areas. As assistant or peer instructors, they will be of considerable help to you in bringing the rest of your squad up to the required standards.

d. Have your assistant instructors watch their men being checked out. This will give them first hand knowledge about where their men need extra instruction or practice should they fail the check-out.

e. In preparation for training, always look at the TEC lesson which covers that task. There may be points covered that will help you answer your men's questions.

f. Always talk to your supervisor when preparing for instruction. He may have information on laying out areas for training, or give you some information on training aids.

g. When you designate a soldier as an assistant instructor for a task, have him view the TEC tape prior to the instruction.

Figure 1.4 continued

Records *

Records fall into three categories — those kept by the trainer or squad leader, those which are kept by the soldier, and the documents used to transfer soldier's records of task proficiency from one unit to another. Their description follows:

1. The *Trainer's Notebook* is maintained by the squad leader and provides a consolidated record of the performance of each squad member on each job task. The information in the notebook will give the trainer the current proficiency level of each member of his squad.

2. The *Job Book* is a performance record that is maintained and retained by each squad member. The job book is used to direct and focus each squad member's individual study and practice.

3. The *Squad Member Transcript* contains a record of a given squad member's performance, and is transmitted to subsequent units in the event of transfer. The transcript identifies the individual and his organizations, the task numbers, and the date of each successful task checkout.

COMMENTS

The following chapters deal with the first implementation attempt, how it was planned, accomplished, and what happened.

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*Samples of each of the following records may be found in the report entitled *Application of the Individual Extension Training System: Guidelines for Materials Development and System Implementation*, HumRRO FR-WD-CA-78-12, by William H. Melching and Morris Showel, November 1978.

CHAPTER 2. SYSTEM IMPLEMENTATION

BACKGROUND

ARI, ATB, and HumRRO all agreed that a necessary research step in developing the IETS would be a full scale try out over an extended period of time. Two battalions were designated by the 7th Division command to serve as the units in which the IETS would be tried out. Representatives of ARI and the Army Training Board (ATB) briefed the Division Commander and his staff on both the purposes and design of IETS as well as the implementation plan. Some concern was expressed over possible interference with the Division Commander's new training program but reassurances of the compatibility of his program and IETS were eventually exchanged.

It was mutually agreed that the Divisions' education center would conduct workshops that were planned for the trainers and training supervisors of the participating companies. The rationale behind this decision was that subsequent system implementation would have to rely on local resources because it would not be feasible for either ARI, ATB, or the contractor to be in the position of conducting such workshops Army-wide.

Battalions commanders, S3, and company commanders from the participating battalions attended a Battalion Training Management Workshop conducted by ATB. Part of the purpose of the workshop was to familiarize battalion level people with IETS with the expectation that it would lead to greater acceptance and support for the system.

The implementation plan called for units to begin using IETS as soon as participating personnel completed the workshop and as soon as the IETS training materials could be printed and delivered to each unit. Trainers and training supervisors were asked to use the materials and the system as they saw fit with the understanding that members of the contractors staff might be present as passive (non-interventionist) observers. Implementation instructions were deliberately designed to relieve units of any responsibility to change their training schedule or priorities. More will be made of this point in the next chapter.

The main implementation vehicle, therefore, was a workshop designed to be given to all trainers and training supervisors before they attempted to use IETS in their units. This chapter is devoted to a description and analysis of these workshops. It is necessary however, to understand the wider implementation context in which the workshops occurred. Discussion of this topic will be presented after the workshop information and will serve as the introduction to the chapter describing the field study evaluation.

IETS WORKSHOPS

PURPOSE

The purpose of the Trainers/Training Supervisor's Workshop was to teach participants:

1. The principles of the Individual Extension Training System (IETS).
2. How to prepare for and conduct military training using IETS materials.
3. How to identify what training is needed and can be conducted when unscheduled opportunities arise.
4. How to use IETS materials to save time and improve training.
5. How to accomplish quality control (for Training Supervisors only).

DESCRIPTION OF THE WORKSHOPS

A workshop consisted of a series of performance-based modules which were to be completed by the student over a period of three days.[1] The student could work in a small group of three or four individuals or alone at his option since progression through the modules was self-paced. In practice, a combination of small group and individual self pacing was usually employed, especially in those modules which required the students to work as a group — one student taking the role of instructor and another student the role of learner.

A performance test, graded on a "GO", "NO GO" basis by a workshop manager, was required for each module. Workshop managers were to fully critique each individual at the completion of a performance test, thereby providing guidance for the student who has received a "NO GO". If the student received a "GO", his progress sheet was initialed and dated by the workshop manager and he was free to proceed to another module.

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[1] A complete copy of all workshop materials is found in an accompanying Technical Report entitled *Application of the Individual Extension Training System: Guidelines for Materials Development and System Implementation*, FR-WD-CA-78-12, by William H. Melching and Morris Showel.

If a student received a "NO GO", he was given specific corrective feedback and told to study or practice in preparation for another test.

Resources for student assistance of each other were built into the design of the workshop. First, there was the small group setting for study and preparation for conduct of training which offered the student the assistance and advice of his peers. Second, the workshop manager was also available should the student need assistance beyond what his fellow students could provide.

Resources for conduct of training as required by each module were present in the workshop area. A road map or guide to the sequencing of module performance was contained within the workshop material. If a written performance test was required, the study material was either contained in the workshop manual or in a handout provided by the workshop manager. For modules requiring the actual preparation for or conduct or performance training, the necessary Task Training Plans (TTPs), Task Training Outlines (TTO cards), and training aids (maps, blackboards, equipment, weapons, etc.) were present in the workshop area for the student to use. Beseler Cue/See (TEC machines) and the appropriate tapes were also available.

The Trainer's Workshop contained ten modules. The Training Supervisor's Workshop contained the same ten modules plus two additional ones which covered specifics of Quality Control and Evaluation of Training — both being the responsibility of Training Supervisors.

The student was guided through the workshop by means of a manual titled *Workshop for Trainer/Supervisor*. This document stated the module's (task's) training objectives, the preparations needed for task training, a guide for task training, and a guide for task checkout. The document also contained a "road map" which described possible sequences from module to module in which training should proceed. It should be noted that the workshop design required self-study rather than reliance on presentations by instructors.

In addition to the document described above, students were given a *Workshop Notebook*. Section I of this notebook provided blocks in which the *workshop manager* could record the student's module to module progress. Section II of this notebook provided blocks in which the *student* could record his progress in teaching the members of his group the technical skills covered in the role playing modules of the workshop.

Staffing was made up of members of the Division Educational Center plus ATB personnel sent specifically to assist in conducting the workshops. Overall, the student-staff ratio ran about 5:1.

PARTICIPATING PERSONNEL AND UNITS

Students were selected by the two Infantry Battalions which had been designated by the Division to participate in the field test of IETS. Only the Infantry MOS personnel (11B and 11C) participated as IETS-related materials were limited to these two MOS for the workshops and the field test. A total of ten workshop were held, five for each battalion. For each battalion, one workshop was for first sergeants, one for trainer supervisors (platoon leaders and platoon sergeants), and three for trainers (squad leaders). A total of 45 training supervisors and 109 trainers completed these workshops. Attrition was very low. Only three men were unable to complete the workshops because of lack of ability or motivation. Another eight could not complete because they were called out for other duty commitments, or because of illness.

WORKSHOP EVALUATION PLAN

The purposes of workshop evaluations were: (a) to obtain feedback on the efficacy of the workshop's content and organization as perceived by participants and observers, which could be used to modify subsequent workshops, (b) to determine success rates on a module-by-module basis, and (c) to see if the workshop changed participants' awareness of and knowledge of desired training practices.

Evaluation data were collected by means of questionnaires administered to the students and by observations of the student's performance in the workshop. The questionnaires were initially administered at the start of the workshop, at the end of each module, and at the end of the workshop. The post module questionnaires were discontinued after the initial workshops. Observations of student performance were made by trained observers, These observations were recorded on a ten-minute block basis according to categories which are listed in Table 1.

WORKSHOP EVALUATION RESULTS

After each series of workshops, the observers met with the COTR and representatives from ATB in order to provide feedback. These were initially presented informally but the suggestions were then organized and presented formally. A sample formal report appears in Appendix 1.

TABLE 1. SCORING GUIDE*

1. Reading module material on own.
2. Discussing module material with peer.
3. Role playing as trainee.
4. Practicing POT. (Practicing as an instructor by self or with peer.)
5. Waiting for checkout.
6. Receiving checkout.
7. Interaction with workshop manager. (Instruction/feedback.)
8. Filling out pink sheets.
9. Activity unrelated to class.
10. Learning content of material from TEC.
11. Learning content of lesson by reading TTP or TTO.
12. Practicing the skill (i.e., hands-on practice of skill before conducting class).
13. Preparing to give a class (e.g., writing up lesson plans, writing out problems and solutions, diagramming on blackboard).
14. Filling out Trainer's Notebook/Job Book.
15. Filling out Training Needs, Module 7.
16. Watching/evaluating UTRAIN tapes.

*This is the final guide; earlier forms had fewer categories.

Module Mastery

Module mastery was based on the "check-out" administered by the workshop manager. Although a "GO/NO GO" criterion was in effect it was apparent to the observers that many checkouts were not conducted well because the managers were prompting the students. Accordingly, observers categorized checkouts into three categories: GO, NO GO, and Prompted GO. A Prompted Go was defined as a recorded GO which, in the judgement of the observer, would not have been earned if (1) the workshop manager had not assisted the participant, or (2) the participant failed to meet the standards but nevertheless received a "GO". The results of these analyses appear in Figures 2.1 (three workshops combined) and 2.2 (two workshops combined).

Note that while all participants officially received a "GO" on every module completed, the "prompted GO" percentage was considerable for certain modules. Feedback was given on this problem to the workshop managers and the frequency lessened in the second group of workshops. Also of interest was the percentage of participants who could not finish module number seven, "Identify Needed Training". This module, from observation, appeared well beyond the understanding of a majority of the participants. Furthermore, an informal survey of the education staff and six observers revealed estimates of between 20 to 50% in response to the question: "What percentage of workshop participants do you feel are qualified to plan training according to IETS principles?".

Module Time

Two separate analyses were done of time spent per module. The second analyses were of the later workshops and woul reflect changes that were made as a result of the feedback sessions described above. Figures 2.3 and 2.4 show for each analysis the average amount of time spent on each module. Noteworthy is the fact that training supervisors took appreciably more time to complete Module 8 — "Conducting Initial Training" — than did trainers. The overall time spent in the workshop did not change appreciably from the first to the second analysis.

The time spent on Module 7, "Identify Needed Training", does not allow for the fact that a third of all participants did not complete it. Modules 8 and 9, the two modules introducing performance oriented training, took up the greatest amount of time relative to the other modules in the first workshop but not in the second. Inspection of Figures 2.3 and 2.4 shows that rewriting the workshop appears to have redistributed the use of time.

MODULE PERFORMANCE DATA
Three Workshops Combined

TOPIC OF MODULE	PERCENT GO	NUMBER OF RECORDED "NO GOs"	PERCENT PROMPTED GO	PERCENT DID NOT COMPLETE
1. Use Workshop Road Map	82	03	18	00
2. Overview of IETS	96	04	04	00
3. Overview of IETS Materials	96	02	04	00
4. Use Trainer's Notebook	67	24	33	00
5. Operate Beseler Cue/See	77	07	23	00
6. Conduct Rehearsal	74	30	26	00
7. Identify Needed Training	51	03	20	29*
8. Conduct Initial Training	72	20	29	00
9. Conduct Refresher Training	65	18	35	00
10. Conduct Performance Oriented Training	67	11	26	04
11. Conduct Quality Control Check**	100	00	00	00
12. Evaluate Individual Training **	91	00	09	00

*Two had to leave workshop early and did not start this module. N = 57

**Trainer Supervisor only.

Figure 2.1 First Analysis

MODULE PERFORMANCE DATA
Two Workshops Combined

TOPIC OF MODULES	% GO	# OF RECORDED NO GOs	% PROMPTED GO	% DID NOT COMPLETE
1. Use Workshop Road Map	81	03	19	00
2. Overview of IETS	100	00	00	00
3. Overview of IETS Materials	95	01	05	00
4. Use Trainer's Notebook	100	03	00	00
5. Operate Beseler Cue/See	91	01	09	00
6. Conduct Rehearsal	81	15	12	05
7. Identify Needed Training	29	01	29	42
8. Conduct Initial Training	95	05	05	00
9. Conduct Refresher Training	81	03	14	05
10. Conduct Performance Oriented Training	81	02	05	14
11. Conduct Quality Control Check*	70	00	00	30
12. Evaluate Individual Training*	50	00	00	50

*Trainer Supervisor only

N = 21

Figure 2.2 Second Analysis

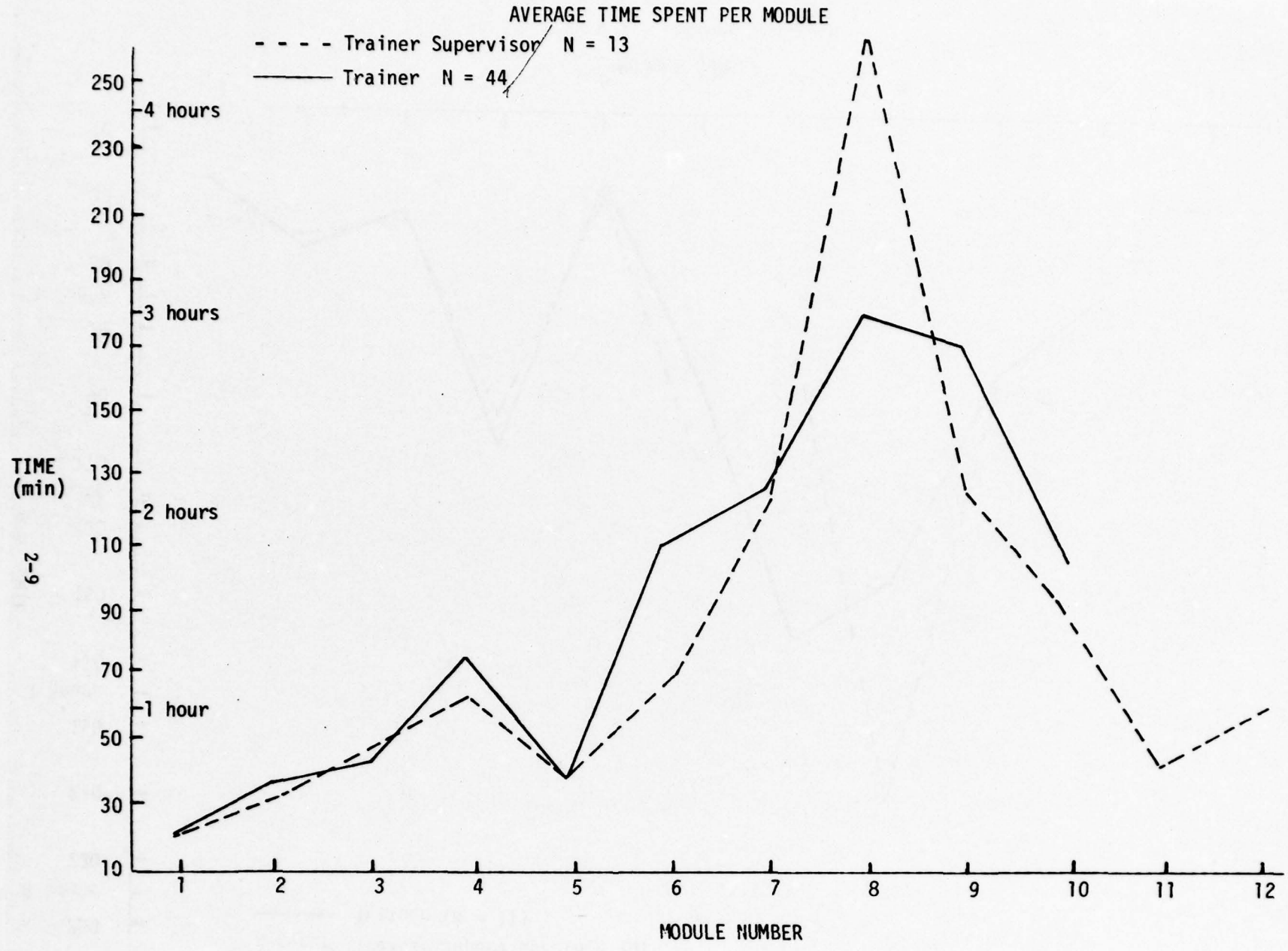

Figure 2.3 First Analysis

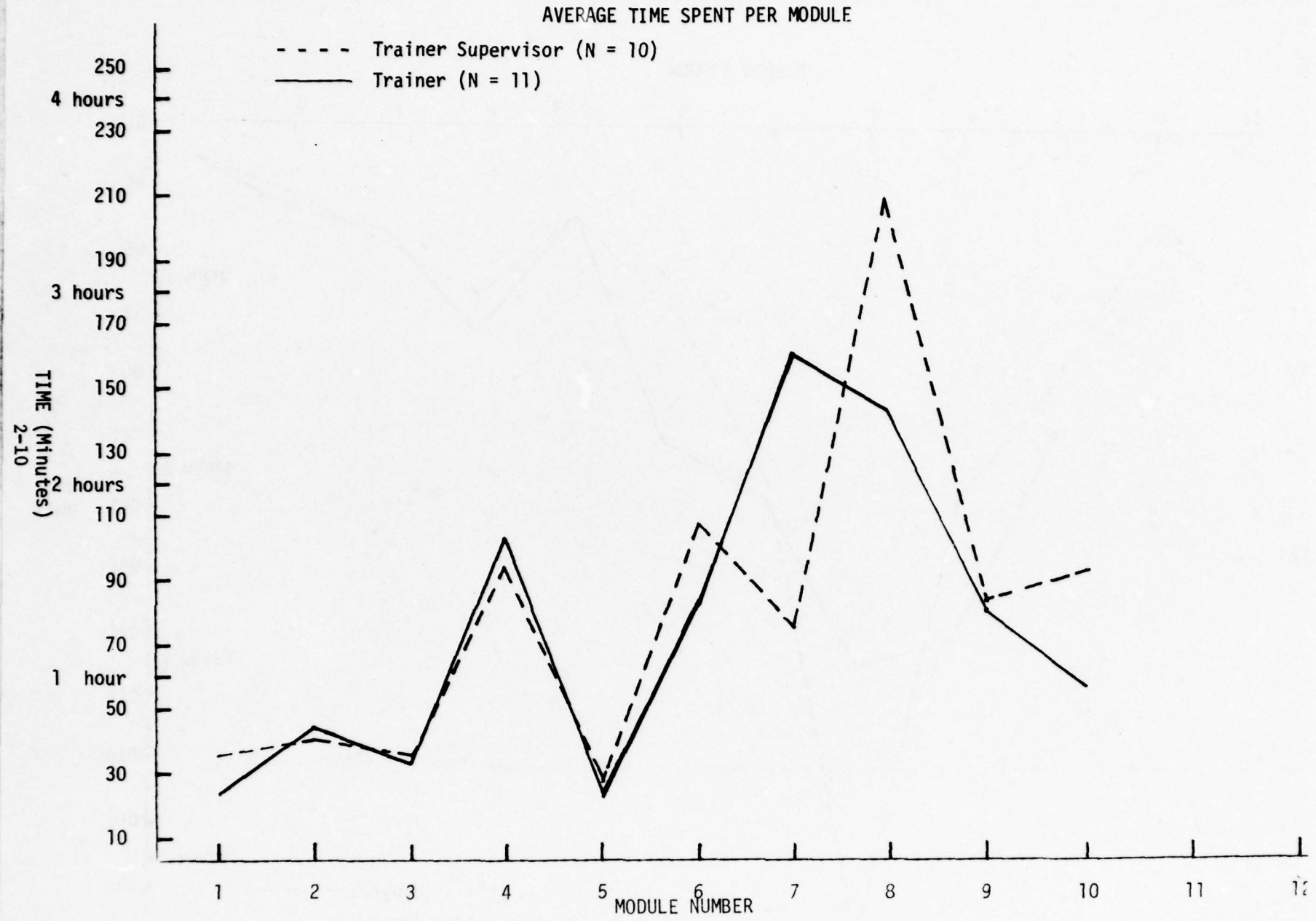

Figure 2.4 Second Analysis

Module Utility

During the first series of workshops all participants were asked to rate the usefulness of each module in providing training in a unit. Results are shown in Table 4. The overwhelming endorsement given to all the modules (even including the workshop roadmap module) confirms the general impression received that almost all of the participants enjoyed and appreciated being in the workshop. This is supported by the answers to the following question: "Would you recommend the workshop to a fellow NCO/officer?" Ninety-one percent said they "definitely would". Solicited comments from participants (about 50% volunteered written comments) are included as Appendix 2. It is important to point out here that the predominent thrust of these written comments as well as the informal verbal comments heard during the workshop is that this training was very meaningful; squad leaders were eager to assume the role they would have in IETS and they thought the materials given to them to prepare for and conduct training were excellent. Their main reservation was scepticism whether they would actually be allowed to function as IETS promised. As will be shown later, their scepticism was founded.

TABLE 2. END OF WORKSHOP EVALUATION OF MODULE USEFULNESS
(Three Workshops Combined; N = 56)

	% Response			
	Very Useful	Useful	Fairly Useful	Not Very Useful
1. Use Workshop Road Map	80	13	05	01
2. Overview of IETS	64	34	01	—
3. Overview of IETS Materials	71	29	—	—
4. Use Trainer's Notebook	89	09	01	—
5. Operate Beseler Cue/See	80	13	07	—
6. Conduct Rehearsal	77	23	—	—
7. Identify Needed Training	82	13	04	01
8. Conduct Initial Training	75	25	—	—
9. Conduct Refresher Training	79	18	04	—
10. Conduct Performance Oriented Trng.	89	09	01	—

Workshop's Effect on Knowledge of IETS

A 40-item questionnaire was administerd at the beginning and completion of each workshop. The items were designed to ascertain whether there were any significant increases in awareness of desirable training practices as a result of having been to the workshop.

In general, the results of this questionnaire strongly indicate that most workshop participants, both training supervisors and trainers, had a pre-awareness of desirable training practices. Accordingly, there could be no significant increase in this awareness as a result of the workshops. Specifically, virtually all the men responded correctly to 25 (63%) of the 40 items *before* the workshop.

Of the remaining fifteen questions which were answered *incorrectly* (defined as less than 84% answering correctly) before the workshop began, ten were answered correctly by the Training Supervisors and eight were answered correctly by the Trainers after the workshop. In looking at these particular questions one can see that, generally, awareness was heightened in two main areas of training: training resources and pretesting. Seven of the ten items pertained to training resources (TMs, FMs, SMs, correspondence courses, advice from a higher authority). Prior to the workshop, the men felt that these resources were necessary for planning and conducting training. After the workshop, a significant number of these men apparently realized the value of TTPs in bringing together all of the information necessary for planning and conducting training.

There also occurred an increased awareness in the idea of pretesting. Before the workshop, the men felt that everyone should receive the same training whether they needed it or not. After the workshop, the mens' answers indicate that they were at least aware of the concept of pretesting, if not willing to put this concept to use. (The observers noted frequent failure on the part of the workshop members to use pretesting during the workshop, and saw little pretesting done in the field during training sessions by trainers who had attended the workshops. More will be said regarding this aspect of POT in a later section.)

In addition to the 40-item pre/post questionnaire, a 14-item posttest was administered upon completion of the workshops. These items appear in Appendix 3. The purpose of these items was to determine whether the men had learned the IETS training principles they were sent to the workshop to learn. Thirteen of the fourteen questions were answered correctly by 95% of the trainers and 98% of the training supervisors, strongly indicating that the knowledge had been acquired. As stated earlier, however, the men came into the workshop with substantial knowledge of how training should be conducted. It is difficult, therefore, to determine exactly what role the workshops played in generating this knowledge. The only question not answered correctly by virtually all the participants (only 66% answered correctly) pertained to pretesting and further substantiates the contention that the concept of pretesting is not clear.

CONCLUSION AND SUGGESTIONS FOR WORKSHOP DESIGN AND CONDUCT

Clearly, almost all of the participants felt the workshop was valuable and enjoyed participating. Despite the many positive aspects, subsequent detailed observations of IETS in operation raised a number of questions concerning the level of POT skill mastery acquired at the workshops. The following suggestions for modifying the workshop are based on (a) observations of the workshops, and (b) three months of observations of the system in the field.[1]

1. Trainers need as much *actual hands-on practice* and training in giving instruction as is possible to provide within a three day period. If they do not feel confident or are not competent to give POT, the system in the field will be seriously impaired.

2. Trainers have not had any appreciable experience as trainers and their knowledge of instructing is based primarily on the platform/lecture model with occasional skill practice. Accordingly, they require extensive modeling of proper POT procedures if they are to be efficiently and effectively trained.

3. The time for trainers to understand the system for scheduling their own training is after they have achieved competence and confidence in their primary roles. During the initial workshop, only those who progress very rapidly and demonstrate mastery of the trainer's role should be exposed to the techniques of planning to conduct training when opportunities arise.

4. Workshop managers need specific guidelines, tips, and performance standardization for their roles in the implementation of IETS.

5. A self-paced workshop need not be a self-instructional workshop. Participants will acquire some information and skills more efficiently and effectively if instructional modes (one on one, small group, lecture/demonstration) other than the printed page are used as the primary medium. An attempt was made to create a new workshop, and this effort is described in Chapter 5 of the accompanying report, *Application of the Individual Extension Training System: Guidelines for Materials Development and System Implementation*, HumRRO FR-WD-CA-78-12, by William H. Melching and Morris Showel, November 1978.

CHAPTER 3. IETS IMPLEMENTATION: RESULTS OF FIELD STUDY

BACKGROUND

To recall, the general idea behind the Individual Extension Training System (IETS) design was to improve the capability of line units to conduct individual skill training. The need for an IETS derives from the fact that in the near future line units will be required to provide much more individual skill training than they have in the past, because of DA policy to reduce the amount of training conducted at schools and training centers. This decentralization is to be extended as far as possible — to the first line trainer (a squad leader) and even to the individual soldier himself as seen by the development of training materials that can be self-instructional such as TEC lessons.

IETS was designed on the assumption that certain conditions could be established. These conditions were: (1) squad members would be trained by their own squad leader, (2) intact squads would have sufficient individual skill training time allotted, (3) squad leaders would be technically proficient in the skills they are to impart and in the techniques of training,[1] (4) training managers and supervisors would hold squad leaders accountable, and (5) duty position qualification as manifested through individual skill training would hold a fairly high priority.

One approach to setting up the tryout or field study would be to gain a commitment from the test units to give individual skill training a high priority and to try to operate the IETS exactly as it was designed. By meeting these conditions, the units would provide the researchers with an opportunity to study the system's components and operation with a view toward providing the feedback needed to fine-tune it. At the end of the field test period, the system would consequently be revised and made ready for further application. However, there is virtually no opportunity possible to implement such an approach in an operational battalion.

Another approach, which seeks to enhance the validity of the results from the tryout, would be to attempt to introduce the IETS into the test units without disturbing normal operations (with the exception of releasing trainers and training managers to attend a three day workshop). Participating units would use (or not use) the materials and the system as they saw fit. None of the conditions listed above (except #3) would be required except as they arose naturally from utilization of the system. The basic rationale here is that this would be what the "real world" was like and attempts to commit units to meeting the conditions listed above would

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[1] This condition would be met through the workshops described previously in Chapter 2 of this report.

be artificial and would provide poor information as to how the system would run "naturally". An unspoken belief behind this approach is that the value and attractiveness of the materials, the system, and the system's objectives would of themselves produce involvement and sufficient utilization to provide evaluation data. Stated another way, this approach assumed that an IETS was *needed* by those for whom it was targeted. It will be shown later in this report that this assumption was not met, although it was this approach toward field testing that had to be and was adopted.

A formal evaluation plan was requested in the third year statement of work. This evaluation plan was designed to answer a basic hypothesis: units which demonstrate the highest fidelity to the standards of the system (role and component definition), that is, receive the higher scores for proper component utilization and role function, will also show higher system output scores (e.g., more soldiers learning to perform more tasks). Concomitantly, they would show higher job satisfaction as well. Analyses would be performed comparing squads, platoons, companies, or battalions. A scheduled vs. non-scheduled training time sub-objective in the evaluation plan would be evaluated by comparing units with equal role/component effectiveness scores to see what the effect of scheduling had on output. Turbulence effects would likewise be ascertainable by matching units of comparable competence in operating the system.

Table 1 (appended to the end of this chapter) lays out the IETS evaluation plan that was submitted in the third year proposal. A technical data analysis program amenable to computer processing, designed to provide a squad-by-squad analysis (and thereby any larger unit analysis) was prepared to facilitate the required analyses.

For this plan to be carried out fully, at least a few squads would have to conduct individual training according to the IETS design. In other words, the IETS would have to be actually in operation for the evaluators to observe its degree of effectiveness. Unfortunately, the IETS was not operated to a reasonable extent by any of the test units, as will be shown below. What follows here are descriptions of what the researchers observed, how they attempted to conduct the evaluation, some data supporting the contention that, in fact, IETS was not in operation, and some suggestions and recommendations for future efforts at individual skill training system development and implementation.

TRAINING PRIORITIES: THE STATUS OF INDIVIDUAL SKILL TRAINING IN INFANTRY UNITS

From our own observations, from interviews, and from analyses of training schedules we identified training priorities as follows: the two infantry battalions assigned to the IETS had as their highest priority the accomplishment of tactical training for unit readiness. This training, which consists of preparation for and conduct of evaluated tactical unit operations (ARTEP) and unit field maneuvers is mainly conducted at field training sites away from Fort Ord.

Next in priority for these units was the support of Combat Development Experimentation Command and training support for Reserve Components. These are fixed requirements for the Division and fulfilling them ordinarily requires relocation of troops away from Fort Ord.

While tactical units are in residence at Fort Ord, high priority is given to the many requirements that must be fulfilled as a result of directives from the Division or higher headquarters. Among these are periodic weapons qualification in primary weapons, familiarization firing with other unit weapons, crew served weapons qualification, and the firing of live demolitions and hand grenades. In addition there is the unit preparation for the Annual General Inspection, which requires weeks of lead time to bring all equipment, clothing, records, and administration up to required standards at the time of the Inspector General's inspection.

Concurrent with weapons firing and AGI requirements, the units continually draw assignments for guard and details. Soldiers are encouraged to take their leaves, to make routine dental and medical appointments, and to take any civilian or MOS education classes during their time in garrison so that the full unit strength can be available for concentrated tactical readiness training and unit support missions.

While tactical integrity is emphasized for tactical readiness training, small unit integrity typically is not emphasized during the unit day in garrison. There is a consistent turbulence within the units while in garrison with men being at a school, on guard or detail, dental or medical appointment, etc. Thus, the operation of a Rifle Company during the garrison period, when its units are not involved in tactical training, results in high levels of turbulence at squad levels. Operations of all kinds — guard, details, SQT training, are organized on a ad-hoc basis, with no attention to organizational integrity. Available company NCOs take

take the men remaining after schools, guard details, personal obligations, and other commitments are attended to, and form them into a group to conduct the training identified on the unit's training schedule. Often, this group, listed as "Company -" (company minus) on the training schedule, will conduct individual skill training with the aid of one or two NCOs as trainers and with 25 or 30 enlisted men, sometimes less, as trainees.

It is commonly believed that a moderate amount of individual skill training could and does occur "in the cracks" during the time units are formally engaged in collective/tactical training. But according to the researchers' observations this never happened. Thus, it can be seen that individual skill training has a very low priority.

Given this low priority of individual training, and the non-mandatory, non-intervening nature of the approach taken in the field study, it is not surprising that employment of the IETS was sporadic or non-existent. The next section describes the implementation evaluation activities that were undertaken.

GENERAL DESCRIPTION OF PLANNED FIELD STUDY PROCEDURES

Introduction

The conditions under which the field study was conducted mandated that the order of test unit priorities described above remain unchanged. As training material was produced, it would be delivered to the two battalion headquarters, with the understanding that it would be properly distributed down to the platoon and squad levels. Three complete sets of relevant training materials were targeted for each squad in each of the eight participating companies. How to use these materials, how to conduct and manage training, and how to keep records of training were taught to squad leaders, platoon leaders/sergeants, and company officers/NCOs in a series of three-day workshops. (These workshops are described in Chapter 2 of this report.) However, in compliance with the "second" approach to implementation, no changes were made in any units operations or plans to accommodate to the new training "system".

Data Sources

Questionnaires concerning attitudes toward and perception of training were administered at the start of the field study with the intention of subsequent readministration to detect possible attitudinal and perception of training changes as a result of IETS experience.

A major activity in the evaluation of the field tryout was the collection of data through the use of first hand observers. Through the presence of observers, utilization of all the system components could be recorded both in terms of frequency and correctness. The observers checklist is shown in Appendix 4. A plan to adequately sample the following kinds of activities was laid out: (a) scheduled individual skill training, (b) scheduled collective training, (c) unscheduled training, (d) off-duty individual skill training, and (e) planning and scheduling of training. Through careful inspection of weekly training schedules and through periodic visits to units to observe non-scheduled activities, it was possible to obtain an accurate and detailed picture of what training was actually occurring in the two battalions.

The original evaluation plan called for the periodic collection and analysis of entries made into the squad leader's or trainer's notebook. Individual skill training progress and achievement was to be recorded in this booklet. The data extracted from this document was to serve as the primary dependent variable of the evaluation; the number, kind, and distribution of skills acquired over time. This output variable was to be compared across units (squads, platoons, companies) in a search for relationships between IETS utilization and output.

Periodically, throughout the field study, interviews were scheduled with small groups of trainers or training supervisors. The purpose of these interviews was to elicit reactions, problems, attitudes regarding IETS. These scheduled interviews did not preclude impromtu brief discussions that occurred in the course of the observation activity.

Data Collection

As soon as the field study was officially begun, researchers began their observations of scheduled training on a daily basis in one of the battalions. (The other battalion left immediately after the first series of workshops were completed for a one month stay at Fort Irwin. Some of these units had some of the IETS training materials available for use but subsequent inquiries did not give any indication that they were actually used at Fort Irwin.) Within a few weeks, there were sufficient signs to

indicate that the new system was not being used on any regular basis. Furthermore, on the few occasions when components of the IETS (e.g., TTPs) were seen to be used, they were usually employed incorrectly or inappropriately. The COTR was informed about this problem and a decision was made to carefully monitor the two test battalions to determine whether or not there was an IETS "system" actually in operation. If there were hard evidence that it was there even to only a small extent, then the planned data analysis would be conducted. Otherwise the planned analyses would be cancelled. The next section brings together the evidence collected.

ASCERTAINING EXISTENCE OF THE SYSTEM USAGE

The six design principles that the IETS was based on were used to organize the investigation of whether the system was in operation:

1. Training is performance oriented.
2. Training is individualized.
3. Training is decentralized.
4. Record of individual skill acquisition kept by immediate supervisor.
5. Formal quality control procedure.
6. Platoon and squad leaders identify and recommend substantial portion of individual training efforts.

Data were sought which would indicate whether each of these principles was being applied in the field. All of the usable observations for a one month period of time were analyzed. A total of 83 separate observations of scheduled[1] training were conducted during this month. Four records had to be discarded because they were improperly filled out, eight others because training was "unofficially" cancelled, thus leaving 71 usable observation records for analysis. The 83 observations are about 95% of all the scheduled non-collective training listed for the month. In addition to the observations, about 25-30 hours of interviews involving approximately 15-20 respondents were conducted as another information source. Finally, Trainer's Notebooks (the squad leader's form for recording training accomplishments) were examined. Results are reported on the basis of the six principles listed above.

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[1] Scheduled training refers to topics of subjects listed on a company's schedule which dealt directly with individual skill training, or, by inference, might include individual skill training.

Results and Discussion

1. TRAINING AND TESTING IS PERFORMANCE ORIENTED.

1.1 Based on Performance Mastery of Soldier's Manual Tasks. The idea of *performance* as the criterion for mastery does seem to have caught on. "Checkout" became a common term for testing mastery. However, by the end of the IETS tryout the precision of a GO/NO GO test was still reserved for SQT scoring. The general practice observed was for the trainer to either checkout each man, one at a time, whether they claimed they knew the task or not, until all had completed the checkout, at which time the class was ended, or (b) the time scheduled for training ended and those who were not checked-out remained unchecked. No observer noted the recording of the individual's status (pass or fail) at the time the checkout was performed.

1.2 Training Follows Prescribed Performance Oriented Training (POT) Procedures. For each of the 71 observations in the sample, an analysis of the manner in which training was conducted was done to see (a) the extent to which POT procedures were properly used, (b) whether it was influenced by the presences of IETS training materials, and (c) whether attendance at the workshop influenced training procedures. The results are shown in Table 2. Proper POT procedures was defined as following any logically correct path on the flow chart shown in Figure 3.1. If an instructor utilized at least two of the activities shown in Figure 3.1 in their proper relationship he was categorized as using elements of POT.

From this table it is reasonable to conclude that (a) very few trainers conduct POT properly, (b) attendance at a workshop does improve the liklihood that POT or elements of POT will be used, (c) the presence of IETS materials alone does not have an appreciable effect on the following of proper training procedures.

2. TRAINING IS INDIVIDUALIZED.

2.1 Self-Paced. No evidence of self-pacing was observed. Skill practice time was not varied according to individual need.

2.2 Based on Determination of *Need* For Training. Of the 71 classes observed, attempts to determine the individual soldier's need for training (i.e., to individualize) were observed 22 times. Attendance at the workshop did not seem to have an appreciable influence on the number of attempts to determine training need. In part, this can be attributed to the fact that virtually all of the classes observed were "refresher" classes and it appeared as though the instructors' main objective was just to present a review of proper procedures followed by an individual checkout.

TABLE 2. ANALYSIS OF OBSERVED TRAINING PROCEDURES

	INSTRUCTOR AT WORKSHOP			INSTRUCTOR NOT AT WORKSHOP			
	CONDUCTED POT PROPERLY	ELEMENTS OF POT OBSERVED	NO POT OBSERVED	CONDUCTED POT PROPERLY	ELEMENTS OF POT OBSERVED	NO POT OBSERVED	TOTALS
IETS Materials in Evidence	9	6	11	2	5	9	42
No IETS Materials in Evidence	1	3	7	1	4	13	29
TOTALS	10	9	18	3	9	22	71

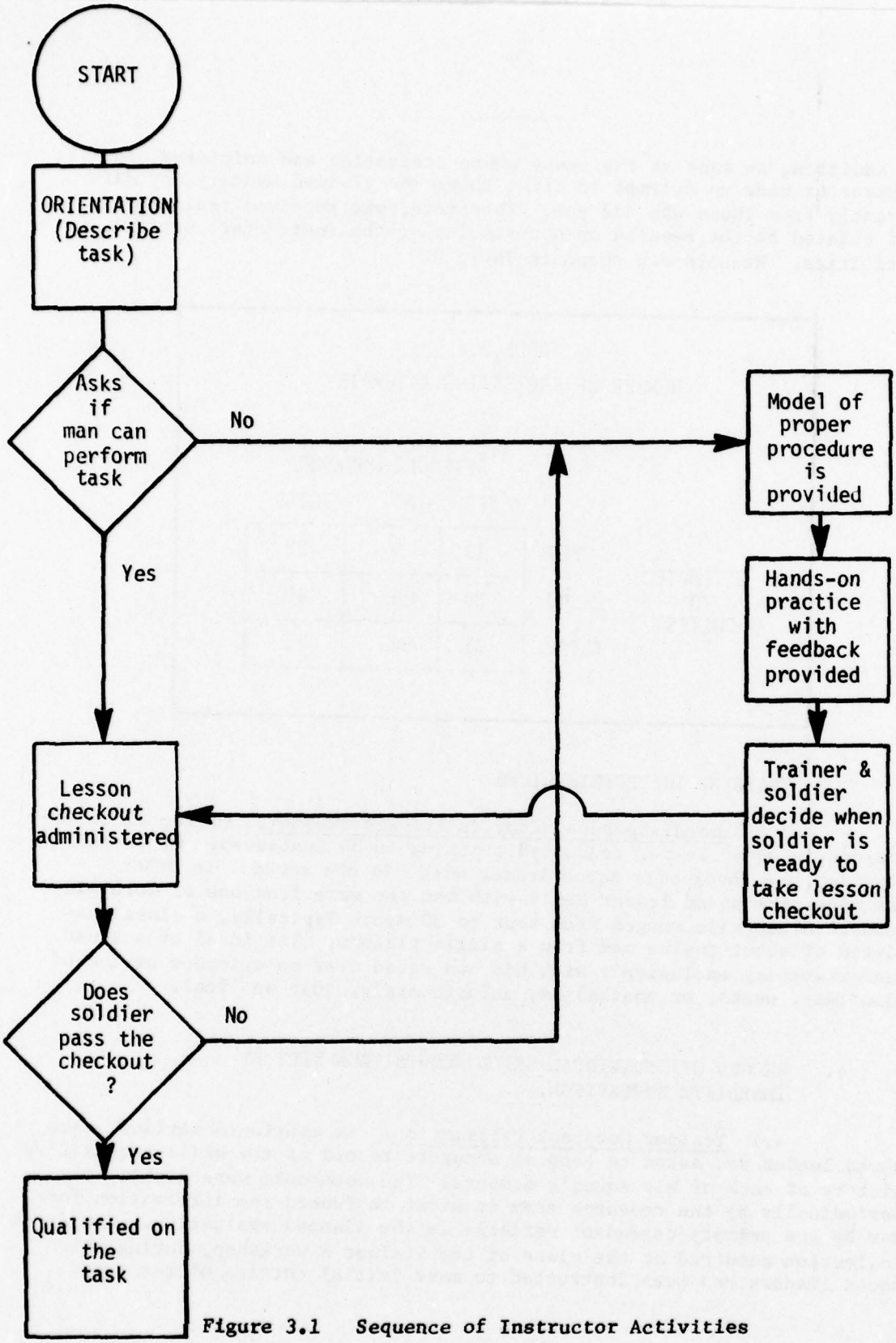

Figure 3.1 Sequence of Instructor Activities

In addition, in many of the cases where pretesting was initiated, the instructor made no attempt to treat those who claimed mastery any differently from those who did not. Therefore, who received training was not related to the results or non-results of the instructors pretesting activities. Results are shown in Table 3.

TABLE 3.
NUMBER OF PRETESTING ATTEMPTS

		ATTENDED WORKSHOP		
		YES	NO	TOTAL
ATTEMPTED TO PRETEST	YES	13	9	22
	NO	24	25	49
	TOTAL	37	34	71

3. TRAINING IS DECENTRALIZED.

3.1 Immediate Supervisor is Primary Trainer. Of the 71 observations, a squad leader conducted training in 34 instances. Of these 34 classes, six involved a squad leader with his own squad. In other instances the squad leader dealt with men who were from one or more platoons. Class size ranged from four to 30 men. Typically, a class consisted of about twelve men from a single platoon. The ideal of a squad leader working exclusively with his own squad over an extended period of time (day, weeks, or months) is, unfortunately, just an ideal.

4. RECORD OF INDIVIDUAL SKILL ACQUISITION KEPT BY IMMEDIATE SUPERVISOR.

4.1 Trainer Notebook Utilization. As mentioned earlier, each squad leader was asked to keep an accurate record of the skill acquisition history of each of his squad's members. The notebooks were picked up periodically by the research team in order to record the information for use by the primary dependent variable in the planned evaluation. The first collection occurred at the close of the Trainer's Workshop, during which squad leaders had been instructed to make initial entries of the squad

members individual skill acquisition status. For reasons never discovered, most of these original notebooks did not find their way back to their owners, and new sets were distributed. The total number, broken down by participating companies, is shown in Table 4.

TABLE 4. NUMBER OF TRAINER'S NOTEBOOKS TURNED IN

COMPANY	WORKSHOP	MAY	JUNE
A	13	11	13
B	11	13	9
C	13	9	0
CSC	14	4	0
A	11	0	0
B	13	6	0
C	12	0	0
CSC	17	4	0
	104	47	22

It is clear from these figures that most squad leaders, if they did keep records (recall, that no recordkeeping was observed at the time of training) did not or would not turn them in for research purposes.

It was not possible to perform any meaningful analysis on the data that was recorded in the notebooks collected. There are a number of reasons to strongly suspect the accuracy of entries. These are:

- Only Gs were recorded (no P or NG).
- Men received GOs in tasks that they are *known* to have failed (part of retention study).[1]
- Virtually no GOs were recorded during training sessions, yet there are many GOs recorded.
- GOs were recorded in clusters. It seems that a group is trained, then tested, and everyone receives an unqualified GO.

[1]See McCluskey, M. and Schmidt, S., *"Skill Decay of Sixteen Common Tasks for MOS 11B and 11C"*, HumRRO FR-WD-CA-78-13, for a full description of this study conducted at the same time as IETS field study reported here.

- Some men are listed in more than one Trainer's Notebook.
- Many Trainer's Notebooks were filled in *just before* they were to be collected by the researchers (based on interviews).

The most important reason for inferring that the records would not be accurately kept is the company-minus training arrangement, since a squad leader would not usually be present when his men were given individual training.

4.2 Use of Transcripts. One IETS component involved a form whereby a soldier, transferring from one squad to another, would carry a copy or transcript of his individual skill status as filled out and verified by his old squad leader. On the basis of interviews and observations, *no* evidence of any transcript being used was collected.

5. FORMAL QUALITY CONTROL PROCEDURE.

Only once was a supervisor seen to be engaged in any aspect of quality control. This particular supervisor used the Division Training Checklist which examines only training process and not outcome. No IETS forms or procedures were observed. None of the soldiers interviewed reported any quality control activity.

6. IDENTIFICATION AND RECOMMENDATION OF FUTURE TRAINING BY PLATOON AND SQUAD LEVEL TRAINERS.

6.1 Trainer Notebook Information. In the only two companies which maintained trainer notebooks, they were not used to identify training needs.

6.2 Use of Roadmaps and Course Management Plans. They were not used.

6.3 Use of TTPs and TTOs. TTPs, TTOs, and other IETS materials are generally kept at platoon or company headquarters and may be issued to an instructor who requests them when the subject appears on the training schedule. Platoon sergenats reported that the materials were used infrequently to conduct training.

Results of NCO Interviews

Continued monitoring of training through observation did not result in any new data which would in any way change or modify the results reported above. There was a continued infrequent appearance of some IETS materials (mainly TTO cards) but no other components or processes of the system were noted. It is fair to conclude that by the end of the IETS tryout, it had not actually been employed and, as a consequence, it was not possible to analyze the data according to the original plan.

We did, however, attempt to gather data reflecting the informed opinions and perceptions of soldiers who did use (or tried to use) IETS components. Before reporting this information, it should be noted that the data need to be interpreted carefully, since the system for which the components were designed was not in operation. For example, a squad leader might state that he did not find the course management plan useful. But this negative opinion may derive from the fact that he was not given any responsibility to *plan* training. Another constraint on interpreting this information is that there is no direct way of knowing whether the respondents who reported using any of the components are representative of the population of potential users. The more experienced, capable trainers may not feel the need for the training aids and, in fact, that is what some told us. Thus, the respondents might generally consist of the less capable trainers. Nevertheless, we did interview job incumbents after becoming aware of the implementation problems.

The following results come from two types of interviews: (a) formally scheduled meetings with one or more supervisors, and (b) impromptu, informal questioning of trainers who were observed in the field. The former represents about 12 hours of interviews with 15 training supervisors. The latter represents contacts with 28 sergeants who were acting in a trainer capacity when questioned. We have organized their responses on the basis of each system component.

1. TASK TRAINING PLANS.

Eleven of the 15 supervisors interviewed found the TTPs very attractive and definitely saw them as shortcuts to and/or substitutes for developing their own lesson plans. Most of the supervisors noticed discrepancies between the task conditions and standards statements in many of the TTPs and the corresponding task statements in the Soldier's Manual, and this became a serious problem regarding their acceptability. They want the TTPs to be consistent with the Soldier's Manual, and with SQT standards and criteria. The trainers were not very interested in the TTPs. Five of the 28 spoke favorably, while the others indicated they are more likely to continue to refer directly to the Soldier's Manual or to the SQT literature that is distributed in preparation for the SQT. It should be noted that one of the test battalions was preparing for an SQT when the interviews were conducted.

2. TASK TRAINING OUTLINES.

Everybody's favorite. Virtually all of the commanders, training supervisors, and the trainers interviewed spoke very highly of them. The only complaint heard was that each task should have only one card associated with it. This component is by far the most salient and popular of all the IETS materials. Their portability and their conciseness are cited as the two main reasons for this popularity. Some of the respondents who had not been to the workshops and who had little awareness or understanding of IETS had, nevertheless, discovered the TTOs and found them useful.

3. COURSE MANAGEMENT PLANS (CMP).

Because use of the system was not encouraged, few trainers even recalled what a CMP was, and thus could not comment upon its value. Training supervisors recognized the *potential* value of the CMP, especially as it might be applied in the scheduling and resource gathering aspect of training management. The resource list was thus looked upon as a favorable element of the CMP. Road maps were not used at the company level, and few respondents had any comments about them.

4. TRAINER NOTEBOOKS AND JOB BOOKS.

The consensus feeling acquired by the research staff was that there exists a built-in resistance to any record keeping at platoon level and below. None of the respondents advocated use of these components. The possible advantages of keeping track of individual skill training are not seen as compensating for the work (and possible consequences) of maintaining records. Trainer notebooks that were turned in were filled out under the direction of the company training NCO, and were frankly done "on the spur of the moment", so it is not fair to judge how useful they might be under more supportive circumstances. Individual soldiers' job books were not used, and in many cases not even distributed, so no one had any comments to make about them.

At the beginning of the chapter we listed five conditions perceived as being necessary for IETS to operate reasonably. A review of these conditions is now in order.

1. Squad composition needs to be maintained with some semblance of permanancy. The high degree of turbulence reported in an earlier project study[1] makes it very difficult for a squad leader to keep track of who is actually in his squad much less trying to keep accurate records of their

[1]Bialek, H. M., *Personnel Turbulence and Time Utilization in an Infantry Division*, HumRRO Professional Papaer 3-77, December 1977.

individual skill training acheivements. If decentralization of individual training down to the lowest level leader or supervisor is to work, then that leader must have some sense of identification iwth his men.

2. Intact squads need to have sufficient individual skills training time allotted. As was shown, the number of times a squad leader was actually alone with his own squad during scheduled individual training time was extremely small. The idea that this group might engage in gainful training while they were waiting for other activities to occur (i.e., "in the cracks" during long spells in the field during tactical or support exercises) assumes a commitment or need that we did not encounter.

3. "Squad leaders would be technically proficient in the skills they are to impart and must be trained in techniques of training." This condition was dealt with through the series of workshops described in Chapter 2 of this report.

4. "Training supervisors must hold squad leaders accountable for training their squad members." We have reported the virtual absence of any quality control efforts, with the result being the absence, therefore, of "command emphasis".

5. "Duty position qualifications as manifested through regular, ongoing individual skill training must hold a fairly high position on the units mission priority list." We discussed the problem of unit mission priorities and individual skill training at the beginning of this chapter. This condition was not met either as reported above. In many ways this condition is a precursor of all the others. It will be discussed in greater detail in the next chapter which contains a discussion of some reasons why implementation of IETS was less than successful. The chapter will also include a description of suggested modifications of existing IETS components.

TABLE 1. SUB-OBJECTIVES, MEASURES, AND PROJECTED DATA COLLECTION PLAN

Sub-Objective Number and Description	Measures	Measuring Instrument*	Data Target	Data Collection Frequency
I.1 Rate of Mastery	a. SL training records	R	All participating squads	Once every two weeks
	b. Perceptions of IETS features	I, Q	All echelons, both Bn	Pre-post
	c. External (to IETS) influences	I, Q	All echelons, both Bn	Pre-post
I.2 Effects on Job Satisfaction	a. Attitudes toward system	I, Q	Supervisors, Trainers, and Trainees	Pre-, mid-test, post-
	b. Job satisfaction	I, Q	Supervisors, Trainers, and Trainees	Pre-, mid-test, post-
I.3 Evaluate training time planning procedure	a. Infer relative levels of preparation	O	All participating squads	Monthly
	b. Analysis of scheduling and planning documents	R	Both Bn	Pre-, during-, and post-
	c. Opinions	I, Q	All echelons, both Bn	Pre-post
I.4 Evaluate utilization & effectiveness of course management plan for 20 duty positions	a. Inspection of train-plans	R	All training plans	Monthly
	b. User evaluation by trainers and squad members	Q	Sample of squads	Monthly

*R = Records; I = Interviews; Q = Questionnaire; O = Observation.

TABLE 1. SUB-OBJECTIVES, MEASURES, AND PROJECTED DATA COLLECTION PLAN, continued

Sub-Objective Number and Description	Measures	Measuring Instrument*	Data Target	Data Collection Frequency
I.5 Estimate the capability of trainers to prepare themselves to teach specific tasks.	a. Observation of training	O	Sample of squads	Weekly
	b. Trainer, squad member and training supervisor estimate	Q, I	Sample of squads	Monthly
I.6 Estimate training supervisors ability to support trainer with learning assistance and with training resources	a. Researcher observation of supervisors' interaction with squad leaders	O	Sample of squads	Bi-weekly
	b. Trainer and supervisor's ratings	Q	Sample of squads	Weekly
I.7 Evaluate Task Training Packages (TTPs), Task Training Outlines (TTOs), the conduct of training, and the conduct of testing (to include pre-testing and checkouts)	Researcher observation of conduct of training. User reactions to:	O	Users: Sample of personnel	Weekly
	a. TTPs	Q, I	Users: Sample of personnel	Weekly (TTP Questionnaire)
	b. TTOs	Q, I	Users: Sample of personnel	Weekly
	c. Testing Procedures	Q, I	Users: Sample of personnel	Weekly
I.8 Determine capability of squad members to self-train	a. Operational effectiveness of role function of squad members	O, I, Q	Users: Sample of personnel	Weekly
	b. Attitudes	Q	All participating squads	During-, post

TABLE 1. SUB-OBJECTIVES, MEASURES, AND PROJECTED DATA COLLECTION PLAN, continued

Sub-Objective Number and Description	Measures	Measuring Instrument*	Data Target	Data Collection Frequency
I.9 Evaluate record-keeping system	a. Utility	Q, R, I	Supervisors, trainers, sample of trainees	Weekly
	b. Attitudes	Q	Supervisors, trainers, sample of trainees	During-, post
I.10 Evaluate quality control mechanisms	a. Thoroughness of performance testing	O, R	Training supervisor QC checks	Weekly
	b. Frequency, validity, and utility of QC checks	I, Q	All echelons, both Bn	Bi-weekly, post
	c. Effectiveness of QC checks and feedback	I, Q	Training supervisors, trainers	Bi-weekly, post
I.11 Estimate global acceptability of IETS	Attitudes	I, Q	Training supervisors, trainers, trainees, all echelons, both Bn	Pre-IETS, mid-test, post

CHAPTER 4. PROBLEMS OF IMPLEMENTATION

IETS was not incorporated into the existing unit training environment for two major reasons: (1) it is not perceived as being NEEDED, and (2) current training managers (company level officers and senior NCOs) are confronted with too many and often conflicting organizational demands and job requirements.

CURRENT ABSENCE OF NEED FOR IETS

Listed and described below are some of the specific reasons why units do not perceive a need for an IETS.

SQT Preparation

In preparing soldiers for the hands-on part of the SQTs, trainers rely almost exclusively on the SQT manual that is provided each year. The performance standards for the hands-on component of the SQT are clearly specified and in specific instances differ from the standards listed in the Soldier's Manual or the TTPs of IETS. There is therefore no advantage in using the IETS materials and there might be a disadvantage. The IETS materials contain much more information than is needed to pass the written component of the SQT which is based squarely on SM contents.

Competing Training Aids

In addition to the Soldier's Manual, a trainer in an infantry unit has at his disposal, Field Manuals, Technical Manuals, TEC machines and lessons, and "How to Fight" manuals and other training aids and documents. All of these materials duplicate to some degree the IETS material in content if not in format. Although the IETS materials are in many ways distinctly superior as training aids and guides, it is not nearly so evident to all the trainers especially since they are much more familiar with the older materials. Another aspect to realize is that in many cases *no* training aids are used because the trainer feels very competent and knowledgeable. This point leads to the next reason for the absence of a need for IETS.

Overlearning of SM Tasks

A small number of skills appear quite frequently on training schedules while the very large remainder of skills which comprise MOS 11B or 11C appear very infrequently. Because of this distribution, the some tasks tend to be overtaught, often resulting in desultory instruction and inattentive trainees. Under these circumstances there is little real instruction or learning going on and thus little need to employ training aids such as TTPs and TTOs. The purposes for this overexposure are never made very clear (excepting SQT preparation) and thus there is little pressure to follow the prescribed instructional steps as found in the IETS materials. "Refresher" training as it is referred to in IETS was not intended as a repetitive, non-purposeful filler activity, but that is what conventional refresher training turns out to be.

No Training on Some SM Tasks

On the other hand, there was no need for TTPs and TTOs for tasks on which no training was ever offered. Since the idea of providing individual skill training in non-scheduled time or on non-scheduled tasks never seemed to catch on, there was never any use made of the many, many different TTPs and TTOs provided the units.

No Awareness of the "Duty Position Qualified" Concept

One basis on which IETS was developed was that of the duty position qualified soldier. Task materials were carefully and expertly organized by duty position to facilitate the planning and conduct of instruction. Since, however, the concept was not recognized in units, nor did it seem to gain recognition, there was little need for course management plans and road maps. We never observed any training which was recognizably planned or conducted around the concept of duty position qualification.

Position of Individual Skill Training on Units Mission Priority List

This is the "bottom line" reason why IETS was not needed. As described in the conclusion of Chapter 3, individual skill training is very low on the list. Accordingly, it is not given the attention (except for the periodic SQT preparation spurts focusing exclusively on those designated tasks) and is not considered in the evaluations of units or efficiency

reports of individuals. Thus, a new system designed to enhance or improve individual skill training was, not unexpectedly, not seen as needed.

Current Training Organization and Training Management Preparation

The second reason why IETS was not incorporated has to do with the roles, duties, and previous training of the officers and senior NCOs at the company level. Not having a direct role in the conduct of individual skill training, except supposedly for quality control, the senior officers and NCOs did not take an active role in individual training under the IETS. When they did get into individual training for purposes of essential SQT preparation or for required weapons qualification, the senior NCOs and officers preferred to use their own centralized training methods rather than IETS. Their workshop exposure did not seem to lead to the kind of system (IETS) support and involvement we had hoped for.

If individual skill training is eventually going to become one of the major missions of line units, a decentralized training system such as IETS will, it seems, require certain conditions if it is to operate successfully. These conditions were stated in Chapter 3. To repeat these conditions again, they were: (1) squad leaders would train their own squad members, (2) intact squads would have sufficient training time allotted, (3) squad leaders would be technically proficient in the skills they are to impart and must be trained in techniques of training, (4) training managers would hold squad leaders accountable, and (5) duty position qualification as manifested through individual skill training would hold a fairly high position on the units mission priority list. In order for these conditions to occur a number of significant changes in the organization of training and in the preparation of officers and NCOs for assignment to line unit positions will have to occur. As things stand now, the training responsibilities and the job duties of these individuals have become quite complex and in many respects conflicting and inconsistent. Primary contributing factors have been the introduction of sophisticated weapons and equipment, TRADOC's introduction of Soldier's Manuals (SMs), TEC, ARTEP, SCOPES, REALTRAIN, and other innovations. The situation will be further exacerbated by the increasing shift of training responsibility from schools to the field. Further complicating the management of training by field commanders are the shortages in equipment, time for training, lack of qualified NCOs and junior officers, and personnel turbulence. Other operational and administrative demands also detract from the commander's ability to develop and manage his unit's training program.

The NCOs are responsible for assisting their commanding officer in discharging his responsibilities and insuring that the unit fulfills its missions. The NCO has a responsibility for insuring that individual soldiers are properly trained, disciplined, and motivated to excel.

With the introduction of SMs, TEC, ARTEPs, and "How to Fight" manuals, greater responsibility has been given to the NCO to insure that soldiers meet the standards specified in these documents. Thus, the senior NCO must not only be expert in his own job, but he must also be able to expertly train NCOs and enlisted men under him. Shortages of officers found in units require that senior NCOs often will have to assume higher levels of responsibility, and that many of the lower grade enlisted personnel will of necessity be required to act in noncommissioned positions. These conditions work against decentralized training down to the squad level.

It is at the company/battery level where the problems of conducting individual training of soldiers and small unit collective training are brought into focus. Meshing individual skill and collective training to permit preparation for SQT and career development of soldiers, while at the same time insuring adequate preparation for ARTEPs, requires a combined effort between commissioned officers and NCOs. Their professionalism and success as a team determine the effectiveness and efficiency of an operational unit in promoting the professional development of individual soldiers.

We do not believe that further attempts at implementing IETS will be any more successful than the first one was unless two conditions are met: (a) there is a major change in the current organization, duty allocation, and duty preparation of line unit trainers and training managers, and (b) there is a greater awareness on the part of proponent agencies of the principles of and procedures for bringing about institutional/organizational change. The two conditions are not unrelated and subsequent attempts to introduce a systematic individual skill training program into units must involve them both.

APPENDIX I

OBSERVERS OBSERVATIONS AND COMMENTS

General Administration/Management

1. The overview talk-through of Module 1 (presented in depth at the beginning of workshop #4) helps students to know where they were going, why and how to get there.

2. The ratio of managers to students should be maintained at 1:4, with managers interacting with students more frequently during study or practice time, rather than just at checkout/critique times.

3. Students should be encouraged to interact with others — not just their tablemates. This would broaden the peer pool, so that students would have more people to practice with, discuss mistakes or problems, seek help.

4. Managers should take a more positive role in giving assistance to slower workers — pairing them with checked-out peers, using them as role players to better acquaint them with module requirements.

5. Managers should continually stress person-to-person informality in presentation of training. There was a tendency for trainer-students to use the TTO cards as prompt notes for the presentation of a lecture. They seemed to have missed the point that these "classes" would be presented to members of their own squads, not to a classroom or theater full of strangers.

6. Sequencing of modules.

   a. Module 7. If this module is to be retained as a part of the workshop, sufficient time should be allowed for students to complete the module and have ample feedback. If the module is considered "optional", consideration should be given to its inclusion in the workshop at all.

   b. Modules 6, 8, 9, and 10: Module 10 is the task for which modules 6, 8, and 9 are subtasks. This point did not come across during the workshops. The POT module should be presented as the module, with subtask checkouts (within module) on the content presently in modules 6, 8, and 9. An end of module checkout on POT, including requirements for rehearsal, initial and/or refresher training should then be conducted. This change would serve at least three purposes:

(1) It would pull the principles of POT together rather than having them appear as fragmented, unrealted tasks.

(2) It would emphasize the need, in maintaining the Trainer's Notebook, for annotating subtasks as well as tasks (a point that was frequently missed in Module 4).

(3) It would help to focus on the training process. Presently, with the requirement to choose a different task for each of modules 6, 8, 9, and 10, the focus is on content and a good deal of time is spent learning (or at least refreshing) the task to be taught, rather than learning how to train in accordance with IETS/POT.

Checkout Procedures

1. Workshop checkout procedures fail to apply the principles of IETS/POT in that:

   a. Checkouts for individuals need to be standardized, including consistent (among managers) application of criteria/standards.

   b. Students should be re-cycled to module(s) in which they need practice, even if they have previously received a GO in a module, but fail that portion on a subsequent checkout.

   (One of the principles of maintaining the Trainer's Notebook is that entries are made in pencil so that changes in soldiers' skill status can be noted — from P to GO, possibly back to P, etc.)

   c. Managers conducting checkouts need to be aware of the module requirements and standards and should have a checklist to follow.

2. Checkouts should focus on the training process, not content or knowledge of the particular skill(s) involved, although critique of technical performance should be included in the checkout feedback.

3. Role players for checkouts should make every effort to be "naive" about the task being taught — in other words, would they have learned how to perform the task if they didn't already know how to perform it?

4. Checkouts should be conducted in accordance with TRADOC PAM 600-11 (which should also be a reference for the Workshop, particularly Modules 6, 8, 9, and 10).

5. During checkouts, students should be required to DO rather than tell.

Resources/Materials

1. TTOs and TTPs are not marked as such — this should be corrected or pointed out to students.

2. Work space appeared sufficient.

3. Sufficient number of managers needs to be available to avoid delays in checkouts and to avoid "group" checkouts.

4. Insufficient resources were noted for the First Aid task(s) — dummies, bandages.

5. Incomplete or incorrect resources were noted. (See comments under "Skill Content".)

Module Content

1. Terminology needs emphasis and definition in simple terms. For example, "A pre-check is to see who knows what"; "A checkout is like firing for record"; "A demonstration is the performance of the task at the normal rate without a step by step explanation".

2. Use of the TTO as an aid should be emphasized; students should be encouraged to use their own words when giving training objectives, orientations, etc.

3. Modules in need of review/revision:

   a. Module 4: Apparently needs clarification and/or a more rigorous test/checkout. What to enter, where to enter it, and who was responsible for the truth of the entries were unclear. Several students said that they would have their AIs or peer instructors check a man out and make the entires in the Trainer's Notebook. Most students were simple required to tell about what they would do to complete the transcript — this was a late development; initially, when students were required to complete a transcript, there was a high failure rate. This solution (lowering the standard) is undesirable. Enforcing the standard of required action is recommended.

   b. Module 7: Universally difficult for students — needs full review and probable revision.

c. Module 12: A checklist would be useful in evaluating the performance shown on the TV tape: look at the training schedule and determine what task is scheduled for the period; obtain the TTO cards for the scheduled task and review them; inspect the training; and critique the instructor after the class as to what he did or didn't do, using the TTO cards as a reference.

4. Key points of each module should be included.

Skill Content

1. Use of the TTP should be encouraged by managers, as it is a new type of document to the soldier. Even though the skills were known to the students, the TTPs are a basic component of IETS and the trainers should be familiar with their use.

2. Task 1004, Determine the Elevation of a Point on a Map, needs some clarification.

a. The TEC tape should be listed as 930-071-0013-F, Terrain Features and Symbols.

b. A blackboard should be listed under "Other Aids".

c. The lesson content and checkout need revision and correction.

3. Task 1009, Convert a Magnetic Azimuth to a Grid Azimuth (or the reverse), should provide an appropriate declination diagram for <u>each</u> practice situation (which may be different from the one on the map).

4. Task 1001, Identify Terrain Features on the Map, needs revision to provide for checkout on five natural and five manmade terrain features.

5. Task 0001, Apply the Four Live Saving Measures, should be revised so that task step 8 is re-titled "Note".

6. Task 0002, Apply First Aid Measures for Special Wounds, should be revised so that it reads (for all three subtasks): Demonstrate How to Apply First Aid For ..."

7. Task 0940, Use a CEOI Extract, needs revision to include a complete extract.

8. Task 2203, Apply Immediate Action to Correct a Malfunction on an M72A2 LAW, should be revised to clarify the procedural steps listed under "Task Steps".

9. So that the demonstrations will be preserved, it is recommended that after the demonstration, the subtask steps should be introduced by the statement: "Show the student how to perform each step and explain each step as you go".

APPENDIX II

SOLICITED COMMENTS FROM WORKSHOP PARTICIPANTS:
Training Managers and Trainers

N responding = 29 (52% of participants)

1. ADMINISTRATION OF WORKSHOP

Workshop should be of longer duration in order to digest more material. Approximately 4-5 days.

I'd like to see this program in effect in the U.S. Army on a whole.

The informal training was very helpful to the learning process and the assistance by the instructors was timely and helpful.

Recommend that refresher training and initial training by this workshop be conducted on a quarterly basis.

If it could be possible it may be a good idea to extend the workshop to four days becuase it may be a good point to brief participants in the program just a touch more in detail.

I feel the workshop manager giving you your checkout should be completely familiar with the recources and information you are using (i.e., TEC tapes).

The workshop should be longer to give a chance to those personnel who find it a little difficult. At least one week. The workshop is very useful.

I personally feel that the system is great, but that it will never be seen at my level, and if it is seen that it won't work. I feel that it's because of company commanders own ruling.

I think this workshop would be a bit better if it was extended for one extra day. That way a person could take his time, since it's a self paced class, to learn more and comprehend every thing he learns. Then when he's at his unit he will be able and confident of giving a better class than he used to give.

Expand system to include more 11C training.

The workshop managers need to get together so they all know what the requirements are and not vary so much when making checkouts.

All units should have this course and the battalions should stick to it.

Have more personnel to give the practice class to. There is a big "pile-up" when trying to give a class practice. (I.e., have more workshop managers.)

It would be nice, if possible, to have small rooms or compartments in which to conduct the classes. It is distracting to be in the middle of a class and have to compete with anoter class next to you. I feel all NCOs should be given this course. The time will present itself when other NCOs will have to teach other than Plt Ldr, PSG, SL, etc.

The course is fairly well organized, however there were several points where I felt that a demonstration/lecture would have been beneficial and time saving, particularly on equipment operation.

The workshop is very good but should be lengthened perhaps one more day - it crams a lot of work into three days now and with slower learners - they are pushing them too quickly without absorbing knowledge 100%.

My main suggestion is to stress the critique at the end of a lesson a little more.

The only suggestion on improving the workshop is to supply more training aids, as I was going to give a class on CEOI subtask A when I was told that the workshop did not have any CEOIs. This task was one of the choices in the module readout, therefore the training aids should have been available.

Extend the course. This way the NCO has more time to analyze and record in his mind almost 99% of this class.

Tell people early out how much of actual instruction the workshop member is to complete, i.e., all of initial training or only one subtask.

Provide all materials needed, i.e., on module 12 all TTP and TTOs were not available - or at least we didn't know they were available.

Often, verbal explanations in addition to written are helpful.

Commanders should know how important it is for a man to complete the workshop once he starts it. The man loses a lot of knowledge and time when he leaves.

2. THE TRAINING SYSTEM

Only one suggestion: Make the commanders buy the program. (Use of gunfire may be necessary.)

Another training acronym. I really admire the thought and effort behind all this, and undoubtedly someone, somewhere, believes that IETS will work. But when will someone do something to provide us with motivated soldiers, instead of yet another nebulous training system (that a lot of NCOs and more than a few officers probably won't accept, anyway)? If the same amount of money were spend on creating individual motivation as is spent on Soldier's Manuals and the rest of the SQT paraphanalia, we would be a real Army again, instead of a large, unwieldy group of pay check grabbers, totally without the desire or ability to fight anybody.

It will be difficult to apply initial and refresher training to fit each individual if I am training a whole squad (eight people) unless I'll have at least four trainers with me.

I think the workshop is outstanding. I've learned quite a lot in the few days that I've attended. And I will practice everything I learned to the best of my ability. I just hope our superiors let the program work.

I feel that this is a very good concept for the training of soldiers.

The only thing that I felt could use some changes, or thought, was terminology (i.e., module, IETS). Although they are good words they might scare the man initially; enough to turn him off - to make him think that because the words are foreign perhaps the course is too difficult. I realize it's minor but please give it some thought.

Although I've learned a lot, I think it's impractical to use such a formal method of training for the men of my squad.

None as of yet; after program has been used in unit then I will have grounds for comment.

No suggestion - I like the workshop. It helped me as NCO.

All in all, I feel that the course is more than excellent.

The road maps should be set up on a platoon board and covered with plastic so that all squad leaders in the platoon may coordinate their efforts so that you would not have two trainers giving the same training.

This workshop was very informative and I hope that it's concepts will be used by the units.

Training aids are good and anything that can be provided to the trainer is something more that will help him in his unit.

I have no suggestions for improving the workshop. The workshop in itself is a very useful training module.

Workshop was very informative and should be given to NCOs and leaders.

In general the workshop was well conducted. The problem with having the student having to spend so much time studying to teach a class was solved.

No suggestions. Very good class.

3. LESSON CONTENT

The CMP's greatest features, I think, is the resource list: very nice to have it all listed in one place.

TTO's hip pocket classes are very useful.

Provide a more complete CEOI extract, or at least make those provided consistent; i.e., put battalion frequencies as well as company frequencies for the battalion and have same information for frequencies as well as callsigns (see 1/2 Armd Division CEOI Extract in resource material).

4. MODULE CONTENT

I feel module 6 should be more concerned with the reasons you give the class the way you do and more of an explanation than an actual class.

Module 8 was not hard to understand, you just have to make sure that you are thoroughly prepared.

Module 1 is simple if you pay attention to what you read; if not it can cause problems.

More time should be awarded to module 7. I believe this is a key module and it will be very beneficial if the use of material is explained in great detail.

Simplify number 7.

I think some of the written text could be more clearly written. Specifically, the instructions for 7 and 12.

Work on explanations - make them simpler and easier to understand.

The workshop notebook should not be used as a trainer notebook when using module 4.

APPENDIX III

ITEMS SPECIFIC TO POST-WORKSHOP QUESTIONNAIRE

The post-workshop questionnaire consisted of the items appearing in Appendix 3, plus the following additional statements.

A: Should usually happen
B: Should sometimes happen
C: Should almost never happen
D: Not needed

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41. Standards used for quality control checkout are the same as those used by the trainer.

42. Once a man has received a "GO" on a terminal task, then refresher training starts with that terminal task.

43. If a man fails the pretest (misses two steps out of five) he is trained on the whole task.

44. If a man fails the pretest (misses two steps out of five) he is trained only on the steps he missed.

45. After the completion of a performance test, trainers give immediate feedback.

46. During skill practice the trainer closely observes his men's actions.

47. Trainer usually decides which Soldier's Manual tasks will be trained.

48. Trainers inform their supervisor of what Soldier's Manual tasks need to be trained.

49. Trainers decide how to train the men.

50. Trainers prepare and plan the training session.

51. Trainers decide which facilities, materials, and equipment will be used.

52. Trainers give end-of-training performance tests to the men.

53. Trainers give pre-training performance tests to the men.

54. Trainers are qualified in the techniques of performance training.

APPENDIX Iv

OBSERVER'S CHECKLIST

DATE _____ OBSERVER _____ Bn_____ Co ___ Plt ___ Sqd ____

Task Title_____ Time: Start_____ End_____ Total_____

Task No_____

	A	B	C	D	E	F
1. Training on Schedule	Yes	No				
2. Listing on Schedule	Topic	SM Task	Not on S	Ind Trng SL Trng		
3. Class Taught	Yes	No				
4. Class Site	Same as S	Other	Not on S			
5. Class Instructor	Same as S	Other	Not on S			
6. Number of students	1-5	6-10	11-20	21-40	Over 40	
7. Students from same	Team	Squad	Platoon	Company	Bn	DA
8. Instructor's Duty Pr	TL	SL	PS/PL	Other		DA
9. Instructor at workshop	Yes	No				DA
10. Instructor alerted	Under 1 hr	1-4 hrs	4-8 hrs	Over 8 hrs		DA
11. TTP used in prep	Yes	No				DA
12. TTO used in prep	Yes	No				DA
13. TEC used in prep	Yes	No				DA
14. CMP's Training Tips used in prep	Yes	No				DA
15. CMP's Self Study Guide used in prep	Yes	No				DA
16. CMP's Resource List used in prep	Yes	No				DA
17. Instructor checked-out	Yes	No				DA
18. Who decided content of class	TL/SL	PS/PL	CC	Bn	Inf DK	DA
19. Was ARTEP/SM Interface used to decide	Yes	No			Inf DK	DA
20. Was CMP's Road Map used to decide	Yes	No			Inf DK	DA
22. Was Trainer's Notebook used to decide	Yes	No				DA

22. Adequacy of equipment	1 per man	1 per 2 men	1 per 3-4 men	Inst. Only		DK/NA
23. Pre-prepared problems	All	Some	None			DK/NA
24. Followed TTP/TTO equipment specs	Yes	Partly	No			DK/NA
25. Followed TTP/TTO procedures specs	Yes	Partly	No			DK/NA
26. Time on demonstration	Too Much	OK	Too Litt	None		DK/NA
27. Time on explain-show	Too Much	OK	Too Litt	None		DK/NA
28. Time on talk-through	Too Much	OK	Too Litt	None		DK/NA
29. Time on Skill Practice	Too Much	OK	Too Litt	None		DK/NA
30. Pre checkout content	Task	Subtask	Other	Not Done		DK/NA
31. Training content	Task	Subtask	Other			DK/NA
32. Checkout Quality Control content	Task	Subtask	Other	Not Done		DK/NA

33. TRAINING OBJECTIVE	Yes	No	DK/NA	58. CHECKOUT	Yes	No	DK/NA
34. Stated requirement	Yes	No	DK/NA	59. QUALITY CONTROL	Yes	No	DK/NA
35. Stated conditions	Yes	No	DK/NA	CHECKOUT/QC SPECS			
36. Stated standards	Yes	No	DK/NA	60. Formal/special	Yes	No	DK/NA
37. SAFETY	Yes	No	DK/NA	61. Stated requirement	Yes	No	DK/NA
38. ASKED MEN TRNG STATUS	Yes	No	DK/NA	62. Stated conditions	Yes	No	DK/NA
39. PRE-CHECKOUT	Yes	No	DK/NA	63. Stated standards	Yes	No	DK/NA
40. Stated requirement	Yes	No	DK/NA	64. Maintained security	Yes	No	DK/NA
41. Stated conditions	Yes	No	DK/NA	65. Observed performance	Yes	No	DK/NA
42. Stated standards	Yes	No	DK/NA	66. Remained silent	Yes	No	DK/NA
43. Maintained security	Yes	No	DK/NA	67. Applied standards	Yes	No	DK/NA
44. Observed performance	Yes	No	DK/NA	68. Gave feedback to man	Yes	No	DK/NA
45. Remained silent	Yes	No	DK/NA	69. Gave feedback to SL	Yes	No	DK/NA

46. Applied standards	Yes	No	DK/NA	INDIVIDUALIZATION			
47. Gave feedback to man	Yes	No	DK/NA	70. Taught NO GO men	Yes	No	DK/NA
48. ORIENTATION	Yes	No	DK/NA	71. Taught NO GO steps	Yes	No	DK/NA
49. DEMONSTRATION	Yes	No	DK/NA	72. Used GO men as AIs	Yes	No	DK/NA
50. EXPLAIN-TALK THROUGH	Yes	No	DK/NA	73. Skipped GO steps	Yes	No	DK/NA
51. Explained & showed	Yes	No	DK/NA	IETS MATERIALS			
52. Talked men through	Yes	No	DK/NA	74. Used TTO	Yes	No	DK/NA
53. SKILL PRACTICE	Yes	No	DK/NA	75. Used TTP	Yes	No	DK/NA
54. Observed performance	Yes	No	DK/NA	76. Made Ntbk entries	Yes	No	DK/NA
55. Praised good work	Yes	No	DK/NA	77. Made Jbbk entries	Yes	No	DK/NA
56. Corrected errors	Yes	No	DK/NA	78. Used TEC	Yes	No	DK/NA
57. Helped slow men	Yes	No	DK/NA	79.			

80. Orientation	Good	Fair	Poor	Not Done		DK/NA
81. Demonstration	Good	Fair	Poor	Not Done		DK/NA
82. Explain-show	Good	Fair	Poor	Not Done		DK/NA
83. Talk through	Good	Fair	Poor	Not Done		DK/NA
84. % of men active in Skill Pr.	-20%	20-40%	40-60%	60-80%	+80%	DK/NA
85. % of ETT/SP time men active	-20%	20-40%	40-60%	60-80%	+80%	DK/NA
86. % of men Checked Out	-20%	20-40%	40-60%	60-80%	+80%	DK/NA
87. % of CO time men active	-20%	20-40%	40-60%	60-80%	+80%	DK/NA